

Growth Working Paper 1

EXPLAINING AFRICAN ECONOMIC GROWTH PERFORMANCE The Case of Mauritius

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1. INTRODUCTION

Mauritius is a small island in the Indian Ocean, 620 miles off the east coast of Africa. Although it is part of the African continent, its location and cultural diversity, in fact, contribute to its distinct identification from the rest of Africa. It is like a city-state of 1.2 million inhabitants with an area of 1,853 square kilometres. In the list of 148 countries, it is ranked 146 in terms of area (bigger only than Singapore and Hong Kong) and 148 in terms of population along with Estonia, Gabon, The Gambia, and Trinidad and Tobago (World Development Indicators). It is deprived of mineral natural resources and is extremely vulnerable to the whims and caprices of a tropical climate. But nature has favoured Mauritius in terms of a sea with extraordinary beaches, extensive marine resources, beautiful landscapes and temperate climate, which attract tourists from the rest of the world.

Mauritius, nevertheless, accelerated its economic growth through the strategy of developing export-oriented manufacturing sector after 1982, continuously modernizing its sugar industry and gradually diversifying into tourism and offshore services. Export-led growth indeed helped Mauritius to increase the per capita income from US\$1,000 in 1982 to more than US\$3,000 in 1995, putting Mauritius in the category of upper middle-income countries. With relatively stable population growth, the growth of the per capita income was accelerated. Further, it attained near full employment by 1990 (most of this in the low-skill textile sector) with, on an average, 5% annual real income growth in recent years. These developments converted a mono-crop (sugarcane) economy into a newly industrializing economy and it stands as a most diversified economy. The success story of Mauritius has attracted many researchers and it is considered a model of economic development that has the potential of changing the destiny of many developing countries. It would therefore be instructive to analyse the factors underlying the growth episodes and document policy implications for other emerging economies in the developing world.

The plan of this research work is to critically analyse the factors underlying this growth. The presentation is organized as follows. Section two documents an overview of growth phases including the structural changes witnessed after 1980. In this section an attempt is also made to analyse the determinants of growth using growth regressions. Sectoral policies and their implications for growth are discussed in section three. Trade policies with particular reference to liberalization episodes are examined in the next section. In section five macroeconomic policies are evaluated with emphasis on stabilization policies. The sugar boom and symptoms of Dutch disease in the early 1970s are discussed in section six, followed by a look at the performance of different markets and response of households and firms, . And then an examination of political economy issues and constraints to growth. The final section concludes.

1.1 Overview of the Growth Phases

The economic history of Mauritius can be roughly divided into three phases. The years from 1960 to 1970 marked a period of slow growth characterized by an import substitution strategy. This took off during 1971–1977 with a greater emphasis on the private sector and foreign investment, but worsened over 1978–1983. At that point, however, measures were taken to strengthen growth, and the period from 1984 to 1988 was one of recovery and prosperity. This continued with further diversification and consolidation from 1989 to 2002, the limit of this study. The phases are detailed in the following sections.

Growth Phase 1960–1970: Slow Growth with Import Substitution Strategy

At the dawn of independence in the late 1960s the economic stagnation of the Mauritian economy was characterized by low growth rate, conservative management and the emergence of a major unemployment problem. The complacency of the economy was reflected by an adverse average real growth rate of 0.7%. The limited ability of the labour market to absorb the Baby Boomers led to an increase in the number of unemployed from 21,000 to 45,000 in 1962, a level estimated to be more than 20%. The victims were mostly young, educated school-leavers.

In this period of disarray, emigration seemed to be the only escape for most Mauritians in search of a better life. In 1963, the government adopted a new industrial policy emanating from the Meade Report (1961). It was in fact the first full-fledged Mauritian industrial policy carrying a strong Fabian socialist stigma. A Development Certificate Scheme extended a wide range of fiscal benefits to industrial ventures for a selected list of import substitution manufactures. Other benefits were tariff and quota protection, duty-free entry of raw materials, and tax holidays. The Development Bank of Mauritius was established in 1964 to support this industrial policy by providing subsidized long-term loans to investors in non-sugar activities. The policy was clearly oriented towards import substitution. Most of the applicants for development certificates also applied for protection from foreign competition in the form of tariff and import quotas.

It was an era of economic transition. This transition phase consisted mainly of reducing the dependence of the economy on traditional agricultural industries, namely sugar, by venturing into the manufacturing sector. Several small-scale industries – food processing, beverages, cosmetics, fertilizers, footwear, furniture and paints – were set up to meet local needs. In spite of this endeavour, the growth of the manufacturing sector was slow owing to lack of capital and skilled labour. Employment creation was not significant, as the enterprises were more capital-intensive and operated under excess capacity. Yet, this initiative had some positive repercussions. It gave birth to a new generation of entrepreneurs and the labour force experienced a new industrial work environment.

Growth Phase 1971–1977: Take off from a Low Base

The second growth phase witnessed a new political outlook. With the coalition government of Labour and PMSD, the Fabian socialism of the Labour Party was twisted more to the right. A greater role was given to the private sector and foreign investors and the government adopted a new development strategy. The Mauritius Export Processing Zone (MEPZ) was set up to create job opportunities and provide the necessary impetus to import substitution industries as well the export-oriented industries. New technology and managerial skills were part of the diversification process, and as a result a take off of the economy was observed. Furthermore, Mauritius was the first English speaking country to join to the Yaoundé Convention in 1972 and establish links with the European Community.

The growth of the economy was further fuelled by the favourable conditions that prevailed for the Mauritian sugar industry on the world market. In 1973, the increase of world sugar prices favoured the Mauritian outstanding sugar yield led to an increase in proceeds hence money supply. This increase in liquidity gave additional boost to the plans initially set by the government. The MEPZ and the tourist industry were further enhanced with the investments of sugar boom profits by sugar companies in joint ventures with foreign investors. The effectiveness of the policies implemented, such as tax holidays, exemptions from import duties and preferential access to European markets was reflected by the overwhelming economic performance in this second phase. The number of enterprises in the EPZ increased to 88 in 1977. EPZ exports rose to 20% of total exports. During this period, savings and investment were high and 32,000 jobs were created. The average annual real

growth of the economy was about 8.2% for the period 1971–77 with the peak real growth rate of 16.6 % in 1976.

Table 1: Structural transformation of the economy

Period	Agriculture's share in GDP	Industry's share in GDP	Services' share in GDP	Manufacturing's share in GDP
1970–74	38.84507	20.99163	40.1633	15.21913
1975–79	22.43625	24.31865	53.24509	15.76402
1980–84	17.57634	24.83232	57.59134	17.33556
1985–89	15.51709	30.45677	54.02615	22.40169

Source: O'Connell and Ndulu (2000).

The government embarked on programmes relating to the provision of public goods, which raised the government expenditures. Education was made free at all levels in Mauritius in 1976, the beginning of continuous efforts to upgrade the human resource. The public needs consisted mainly of health services, education, housing, social security and other social services. As a result, the unemployment rate declined drastically. Wages and salaries as well as government subsidies increased substantially, which had considerable influence on private consumption. The growth and composition of government expenditure during the boom period clearly reflected the government's priorities and its general drive towards income redistribution. This stimulating influence of the expansionary policies of the government on the demand for food products and consumer durables was directly reflected in higher imports.

This simultaneous pursuit of both import substitution in the home market and export promotion strategies led to some policy contradictions. The high rates of growth were not sustainable as they rested on the sudden windfall gain of the sugar boom. In addition, the sugar boom was wasted through extravagant public sector projects, generous wage awards, social transfers and subsidies.

In the post economic euphoria period (1978–1983), the average real growth was 1.7%. In the same breath, the budget deficit deteriorated due to excessive public expenditure undertaken by the government. Further, the upshot in import outflow with inadequate export inflow led to larger deficit in the balance of payments. The economic situation worsened with an inflation rate of 42% in 1980. External as well as local factors were responsible for the economic downturn. The major external influence was the world oil crisis in 1979/80, which fuelled import prices in the first instance. Second, soaring oil prices inflated airfares with adverse effects on the tourist industry. The weakening of the world sugar market was indeed another contributing factor to the economic crisis. At the local level, the euphoria years triggered a surge in consumption and imports.

During the same period, the economic indicators provided a gloomy picture of the Mauritian economy. The balance of payments had a record deficit of 932 million rupees in 1981. Deficit of the government attained Rs1,160 in 1982, one the highest for the decade. Unemployment was out of proportion, with 73,000 jobless in 1982. Inflation reached 42% in 1980. In 1981, the current account as a percentage of GDP was a record high at 14.4%. The Mauritian economy was on the brink of collapse.

Growth Phase 1978–1983: Worsening Economic Scene

Serious economic measures had to implemented to revive the drowning economy. As a response to the critical economic situation, a structural adjustment programme supported by a standby arrangement with the International Monetary Fund (IMF) was adopted in 1979. The main policy measures implemented were fiscal stabilization, exchange rate re-alignment,

cautious wage policies, trade liberalization, financial consolidation and sectoral/supply side policies.

The first move was the devaluation of the Mauritian rupee by 30% in October 1979, followed by a second devaluation to correct the over-valuation of the rupee, which was impeding export development. The currency policy ensured that Mauritian exports maintained their competitiveness. In addition, the export promotion strategy paved the way towards boosting the EPZ sector. In the same vein, restrictive demand management policies were used to curtail aggregate expenditures, with the ultimate aim of dampening the extravagant private and public consumption behaviour of previous years. Subsidies on rice and flour were reduced and a restraint was imposed on the credit market in order to curb private consumption expenditure. In spite of the government efforts to stabilise the economy, however, it's the economic performance was disappointing because of the detrimental effects of unfavourable climatic conditions on production. But as the inflation rate slipped to 14% in 1981, the economy was adjusting itself to take advantage of the devaluation of the rupee.

Growth Phase 1984–1988: A Period of FDI-Export-Led Rapid Growth

From 1983 onwards, the adverse economic situation reversed and the Mauritian economy entered an era of prosperity. The employment situation changed drastically as a result of an accelerated demand for labour due to the expansion of export-led industries. The number of unemployed plummeted to 16,000 in 1988. Average real output growth rate was about 7%. In 1988, the investment rate rose to 28.2, so did the savings rate, which climbed up to 28.6% in 1986. Contractionary policies combined with supply response led to a dramatic improvement in the balance of payments position.

The current account of the balance of payment changed from a deficit of 15% of GDP to a surplus of 5% over the period 1983–1987. The inflation rate dropped to 0.6% in 1987, rendering the EPZ sector more competitive. With such favourable economic conditions, the number of EPZ enterprises rocketed to 591. In the late 1980s, the implementation of PRB, NRB and Chesworth reports increased wages in both public and private sectors. These developments contributed to a sharp increase in private consumption. The reduction of duties on a number of consumer goods, as well as the expansion in economic activities and employment, increased private consumption.

Growth Phase 1989–2002: Further Diversification and Consolidation

In two decades, Mauritius transformed itself from a mono-crop economy, solely dependent on sugar, to a diversified one comprising the manufacturing and services sectors. In 1989, the offshore centre was set up, which has attracted more than \$4 billion of offshore funds. The Stock Exchange of Mauritius (SEM) started to operate in the same period. Stimulated by the EPZ, the free port was created in 1992 as a part of its strategy to develop as a regional trade centre.

In 1997 tourism increased by 10%, the EPZ by 6%, financial services by 5.9% and sugar by 5.5%. Inflation was 6.6% in 1997. At the World Economic Forum in 1998, Mauritius was named the most competitive economy in Africa. The country reached the apex in terms of competitiveness among the pyramid-like listed African countries. Moreover, Mauritius was ranked 29th in the World Competitiveness Report of 1999, outperforming some “Asian Tigers”, and first among African countries.

1.2 Growth Regressions

Our aim in this section is to identify the sources of growth in the Mauritian context. The Solow growth model has undauntedly been the foundation for understanding the sources of

economic growth, and the consequences for long-run growth of changes in the economic environment and in economic policy. However, to analyse the sources of growth in a less restrictive way, one that is not bound by economic theories, economists have developed an alternative framework called growth accounting to obtain a different perspective on the sources of economic growth.

Growth accounting breaks down growth in terms of its sources, namely accumulation of physical capital, human capital and productivity. This approach originates from a “benchmark” Cobb–Douglas production formulated by the Collins and Bosworth (1996):

$$Y = A(K)^{0.35} (hL)^{0.65} \quad (1)$$

where Y is output, K physical capital, L is labour and h the labour quality index. hL represents effective labour, and 0.35 and 0.65 are output elasticities with respect to capital and labour, respectively. To obtain the value of h, Collins and Bosworth (1996) assumed, consistent with international evidence on wage premiums, that ceteris paribus each year of educational attainment raises labour’s marginal product by 7%.

In per unit of labour terms,

$$\frac{Y}{L} = A \left(\frac{K}{L} \right)^{0.35} h^{0.65} \quad (2)$$

where $y = \frac{Y}{L}$, output per unit of labour

$k = \frac{K}{L}$, capital per labour ratio

A= residual, index of total factor productivity.

Log-differencing yields,

$$\Delta \ln y = 0.35 \Delta \ln k + 0.65 \Delta \ln h + \Delta \ln A \quad (3)$$

A glancing at Equation 3 reveals that change in average output is explained by growth in capital per unit of labour, growth in education per unit of labour and growth in total factor productivity. It should be pointed out the total factor productivity is the residual of the decompositions. The regression-based decomposition results of Mauritius, East Asia and Pacific and sub-Saharan Africa are presented in Table 2.

Table 2: Growth accounting decompositions for Mauritius, East Asia and Pacific, and Sub-Saharan Africa

Period	Mauritius				East Asia and Pacific				Sub-Saharan Africa			
	Growth in real GDP per worker	Contribution of:			Growth in real GDP per worker	Contribution of:			Growth in real GDP per worker	Contribution of:		
	Physical capital per worker	Education per worker	Residual		Physical capital per worker	Education per worker	Residual		Physical capital per worker	Education per worker	Residual	
1960-64	3.82	-0.30	0.48	3.6	1.81	1.84	0.40	-0.43	1.26	0.86	0.14	0.26
1965-69	-2.31	-0.68	0.42	-2.04	4.29	2.27	0.51	1.51	1.60	1.03	0.18	0.39
1970-74	4.57	0.27	0.42	3.88	4.55	2.51	0.40	1.64	2.29	1.22	0.20	0.87
1975-79	3.04	0.64	0.62	1.78	4.39	2.43	0.47	1.49	-0.10	0.81	0.27	-1.18
1980-84	-2.33	-0.65	0.33	-2.01	3.54	2.40	0.67	0.47	-1.28	0.41	0.30	-1.99
1985-89	4.90	0.56	0.24	4.10	3.52	1.69	0.69	1.15	0.64	0.06	0.30	0.28
1990-97	3.04	1.39	0.14	1.51	4.94	2.29	0.39	2.26	-1.55	-0.14	0.18	-1.59
Total	2.10	0.18	0.38	1.55	3.86	2.20	0.5	1.15	0.44	0.61	0.23	-0.42

Source: Collins and Bosworth (1996).

Table 3: Actual and predicted sectoral contribution to GDP in Mauritius

	Agriculture/GDP			Industry/GDP			Services/GDP			Manufacturing/GDP			Agriculture's share of the labor force			Ratio of ALP in non-agri to ALP in agriculture		
	Actual	Fitted	Residual	Actual	Fitted	Residual	Actual	Fitted	Residual	Actual	Fitted	Residual	Actual	Fitted	Residual	Actual	Fitted	Residual
1960-64		21.33			24.08			54.59			2.17		38.49	74.68	-36.18		13.36	
1965-69		19.72			24.85			55.43			2.57		35.7	71.67	-35.97		13.10	
1970-74	38.85	20.75	18.09	20.99	22.36	-1.37	40.16	56.88	-16.72	15.22	0.90	14.32	32.6	71.42	-38.82	0.76	12.18	-11.41
1975-79	22.44	16.98	5.45	24.32	25.47	-1.15	53.25	57.55	-4.30	15.76	2.63	13.13	29.14	66.96	-37.82	1.42	12.57	-11.15
1980-84	17.58	15.60	1.98	24.83	25.82	-0.99	57.59	58.58	-0.99	17.34	2.72	14.62	24.91	64.52	-39.61	1.57	12.33	-10.75
1985-89	15.52	14.45	1.07	30.46	25.75	4.71	54.03	59.80	-5.78	22.40	2.46	19.94	19.62	62.66	-43.05	1.34	12.06	-10.72
1990-97	10.70	12.6	-1.90	33.20	26.99	6.21	56.10	60.41	-4.31	23.80	3.35	20.45		58.98			12.11	
Total	21.01	17.35	4.94	26.76	25.05	1.48	52.22	57.60	-6.42	18.90	2.40	16.49	30.08	67.27	-38.57	1.28	12.53	-11.01

Source: Collins and Bosworth (1996).

Growth Accounting

Table 1 provides the growth decomposition by half decade. Mauritius seems to be midway between East Asia/Pacific and sub-Saharan Africa in terms of growth in real GDP per worker, although a slight difference prevails. The disparity between Mauritius and East Asia/Pacific is 82%, in contrast to sub-Saharan Africa, which is 70%. The results further suggest that the contribution of physical capital to growth in Mauritius is the lowest, at 0.18, compared with the Asian and sub-Saharan African countries, which are 0.5 and 0.23, respectively. In fact, the contribution of physical capital has been substantially low since the 1960s, but started to pick up in the post 1990 period. In the case of the contribution of education per worker, once again the East Asia/Pacific countries take the lead with 0.5, followed by Mauritius and the sub-Saharan African countries with 0.38 and 0.23, respectively. The results further indicate the importance of the contribution of the residual or the contribution of total factor productivity (TFP) towards growth in Mauritius in contrast with sub-Saharan Africa and East Asia/Pacific.

The results presented in Table 2 suggest that the growth accounting exercise is giving a true picture of the growth phases outlined in the previous section. The social instability in the 1965–1969 period is shown by the negative values of growth in real GDP per worker and physical capital per worker. At the outset, the Mauritian economy was characterized by economic stagnation. This was reflected in Table 1 by the low contribution of physical capital in the 1960–1964 and 1965–1969 periods. Further, it was again low during the 1980–1984 recession years. Diversification of the economy in the 1970s decade and the post 1984 period bolstered the contribution of physical capital per worker. In other words, the figures show that the high ratio of investment to GDP has pushed the contribution of physical capital, except for the period 196–19-64. TFP was highest in the 198–19-89 period. During this period, the Mauritian economy was in a boom phase. During these periods, high levels of TFP are due to the introduction of technology and managerial skills as part of the diversification process. TFP, however, experienced a dramatic fall from 4.10 in the period 1985–1989 to 1.51 in the period 1990–1997. This decline may be attributed to the poor maintenance of public infrastructure and climatic upheavals that influenced the agricultural sector. However, the contribution of education per worker does not seem to be related to the state of the economy and has been relatively low throughout the different growth phases.

Structural Changes

Structural changes refer to the change of sectoral shares of labour and output in the process of development. In this process, factors of production are re-allocated. They are shifted from low factor productivity sectors to those with high factor productivity. Structural changes have been argued by scholars to be a very determining factor in the promotion of economic growth and development (Lewis, 1954; Chenery,). O'Connell and Ndulu (2000) argued that structural changes have important implications for resource allocation.

The results presented in Table 3 are based on the Chenery/Syrquin regressions for sectoral output and labour (for a good description see O'Connell and Ndulu, 2000). The share of agriculture in GDP has declined over time. It slipped from 38.85% in 1970–1974 to 10.70% in 1990–1997. This explains the closure of several sugar factories and the transformation of an agriculture dependent economy. Furthermore, the share of the industry as well as manufacturing in GDP exhibited an upward trend. On one hand, the share of industry to GDP rose by 58.1% from the 1970–1974 to the 1990–1997 period, and on the other hand the share of manufacturing to GDP increased by 56% during the same period. This clearly illustrates structural changes in the economy. The share of services in GDP, though having the major share of GDP at 56.6% in the period 1990–1997, has increased by only 39% from the period 1970–1974.

It is further noted that the predictions for the share of agriculture in GDP are lower than the actual shares, except for 1990–1997. The actual share of services in GDP is lower than the predicted values, suggesting that the service sector's size is smaller than international norms would expect it to be (see Ndulu and O'Connell, 2000). The actual share of the manufacturing sector is much higher than the predicted shares in GDP. In the first three phases, the actual share of industry in GDP is lower than the fitted values, but this trend reversed in the last two phases. The argument of structural changes is further reinforced by the trend of the share of labour force in the agricultural sector. The agricultural labour force has been steadily declining over time, in other words, there has been re-allocation of resources.

Sources of Economic Growth

In this section, we investigate the sources of growth using two approaches, Hoeffler's (1999) augmented Solow model and the pooled conditional model of O'Connell and Ndulu (2000). The Hoeffler approach will be considered in the first instance. The main sources are initial income, investment rate, replacement investment based on population growth and level of education attained. Results of this approach are based on a cross-country regression study and are presented in table 4. The growth predictions have been positive, except for the 1965–1969 and 1980–1984 periods. These two periods in fact were the bad economic phases in Mauritius. The results further show that growth for Mauritius is under-predicted.

The growth deviation from the sample mean is negatively affected by changes in initial income and investment rate. Initial income adversely affected the growth deviation during all phases, except for the sugar boom years (1970–1974). It was a substantially low contribution at 0.03, however. The investment rate had a more depressing effect at an average of -1.49 on growth rate relative to other sub-Saharan countries in contrast to -1.19 for initial income. Initial education attainment, replacement investment term and time dummies had on average a positive influence on growth. According to Hoeffler's model, there are other sources that may explain growth in Mauritius and this is reflected by the large residual. The residual has been particularly high in boom periods (1970–1974, 1985–1989).

Table 4: Hoeffler's SYS_GMM estimation of augmented Solow model

Period	Actual growth	Predicted growth	Residual	Actual deviation of growth from sample mean	Estimated contribution of					
					Initial income	Investment rate	Initial Education attainment	Replacement Investment term	Time dummies	Residual
1960–64	1.83	0.23	1.60	-0.11	-0.50	-1.03	-0.01	-0.74	0.60	1.58
1965–69	-5.37	-0.95	-4.42	-7.30	-0.78	-2.87	0.01	0.14	0.63	-4.44
1970–74	8.34	2.00	6.34	6.40	0.03	-0.86	0.06	0.91	-0.06	6.32
1975–79	1.84	0.19	1.65	-0.10	-1.23	-1.04	0.06	0.23	0.26	1.63
1980–84	1.16	-2.58	3.74	-0.78	-1.51	-2.81	0.11	1.15	-1.44	3.72
1985–89	6.46	0.35	6.11	4.53	-1.68	-1.30	0.12	1.20	0.10	6.09
1990–97	3.37	0.44	2.93	1.44	-2.66	-0.56	0.12	1.02	0.60	2.91
Total	2.52	-0.05	2.56	0.58	-1.19	-1.49	0.07	0.56	0.10	2.54

Source: Ndulu and O'Connell (2000)

The results of the pooled conditional model are presented in Table 5. It can be deduced that the growth performance has been higher compared with the sub-Saharan counterparts, except for the periods 1965–1969 and 1984–1980. It is nevertheless noted that the growth deviation from sample is narrowing. Thus, the Mauritian economy seems to be converging towards the African norm, which is illustrated by lower deviations (1990–1997) in both tables 3 and 4. This approach seeks to assess the influence of base, political and policy variables on the predicted growth deviation.

The base variables consist of life expectancy at birth, age dependency ratio, growth in potential labour force participation, trade shocks and initial endowments. With the highest estimate (0.42), the contribution of the base variables proves to be very influential in contrast to political stability (0.18) and policy (0.02). The pre-independence period is typified by a negative contribution of the base variables. During the 1985–1989 boom years, the contribution of base variables was indeed very high at 1.55. The explosion of exports as a result of the trade liberalization process was predominant in this period and thus can be an explanation for this high contribution of base variables to predicted growth deviation. In the subsequent period (1990–1997), the contribution however subsided.

Regarding political stability, a stable contribution at 0.20 is noted for most of the periods, except for the 1975–1979 era, which was 0.13. This was a period characterized by the temporary suspension of the democratic system. The contribution of policies has been positive throughout most of the periods, except for 1980–1984. Further breaking down of the policy variables indicates that government has been unproductive.

Table 5: Pooled conditional growth model

Period	Fits and residuals			Actual and predicted growth deviation				Breakdown of policy contribution by variable		
	Actual growth	Fitted growth	Residual	Actual growth deviation sample mean	Contribution to predicted growth deviation			Inflation (>500%)	Black market Premium (>500%)	B/L gov't spending/GDP
Base variables					Political stability	Policy				
1960–64	4.78			2.58	-0.89			0.05		0.16
1965–69	-1.52			-3.72	-0.23			0.05		-0.01
1970–74	4.97			2.78	1.07	0.20		0.02		-0.11
1975–79	6.01	3.03	2.97	3.81	0.46	0.13	0.03	0.02	0.14	-0.13
1980–84	0.11	1.78	-1.67	-2.09	0.29	0.20	-0.19	0.00	0.12	-0.31
1985–89	6.55	3.60	2.94	4.35	1.55	0.20	0.11	0.04	0.14	-0.07
1990–97	4.12	3.02	1.10	1.92	0.72	0.20	0.15	0.03	0.11	0.01
Total	3.57	2.86	1.33	1.37	0.42	0.18	0.02	0.03	0.13	-0.07

Source: Ndulu and O'Connell (2000).

2. ECONOMIC DIVERSIFICATION AS A DEVELOPMENT STRATEGY

The process of economic development entails several structural changes and diversification in an economy. The most important one is transfer of resources from agriculture to manufacturing and services. There are two dimensions of resource allocation during the process of economic transformation. The first case refers to a spatial transfer of resources when factors of production – labour and capital – contribute to densification in a geographical area. High population and employment densities in urban areas can be explained in terms of economies of scale and scope. These agglomeration economies reduce per unit cost of production for variety of goods and services, and along with transportation costs, define the limits of an urban area (Henderson, 1986; Mills, 1991).

The second dimension, which is more interesting, is when economic densification is obtained because resources move from one economic activity to another. This may happen because decentralized availability of infrastructure facilities in a very small country may not generate sizeable localization economies for investment activities. Nevertheless, productivity gains may be available to some major economic activities irrespective of their geographical location. This would be particularly true when considerable dependence on external sources of supply of inputs and market outlets is observed. Krugman (1994) argued that with export orientation and high dependence on imports, workers would be less willing to accept high commuting and land costs in order to be close to the metropolitan (urban) supplier. He further added that these factors along with sea beach international tourism would immensely contribute to the dispersal of both population and economic activities.

Thus, the spatial mobility of factors of production would be replaced by use mobility, resulting in a very different pattern of densification: labour and capital would congregate in some economic activities and not necessarily in a geographical area. In this way, resources do not move spatially but they are nevertheless transferred from agriculture to manufacturing and services. This is the case of a small country like Mauritius, which initially depended on sugar exports and international tourism for its development but moved significantly to industry and services.

2.1 Sugar Boom Financing of Industrial and Tourism Development

During a period of structural transformation and resource reallocation, traditional sectors like agriculture face relative decline in its share in GDP. The agricultural decline hypothesis is generally explained in terms of Engel's law and diminishing marginal returns in agriculture. Both demand and supply elasticities tend to decline during the process of economic growth, thereby reducing the share of agricultural output in GDP. The low income elasticity of demand for food products causes the relative prices of food to decline. This will result in lower agricultural share in GDP. However, capital accumulation and technological changes have had significant effects in some countries in reducing the significance of agricultural share. The slow pace of technical change in agriculture is well documented. As regards capital accumulation, the Rybczynski effect posits that when the aggregate stock of capital increases in relation to the labour supply, the output of the most capital-intensive industry will increase proportionally more than the growth of capital (under constant returns to scale). The share of labour intensive industry will decline absolutely.

The story line about the decline of sugarcane and sugar export dominated agriculture is entirely different. Sugar prices have generally been higher than world market prices under the Sugar Protocol. These prices have shown a trend to rise and there was a substantial upward revision in early phases of development. For example, between 1972 and 1975, sugar prices rose by more than three times. During this sugar boom, not only did sugar profits increase,

but gross earnings of the sugar sector rose from 15.2% of GDP in 1971–1972 to 34.2% in 1974–1975. In this situation, the role of rapid capital accumulation and technical change in explaining the decline of the sugar sector would assume special significance. What is important is that the problem did not lie in the terms of trade; in fact, the sugar sector generated substantial surplus for investment in other sectors of the economy.

A part of this surplus in the sugar sector was mopped up by levying a sugar export tax. Whereas this tax diverted a part of sugar profits to public finances, it also generated disincentive effects on investment in the sugar sector. In this way, the sugar industry was rendered an unattractive proposition for reinvestment. Owing to the prohibition of investment abroad and exchange controls, sugar surpluses were partly diverted to export promoting industrialization. These developments can be compared with the policy of agriculture taxation in Japan during the Meiji Restoration, which was designed to finance the state led industrialization. In the Mauritian context, however, the government's sugar tax policy helped divert the agricultural surpluses to industry in the form of private investment. Further, during the boom, the hotel sector also provided avenues for the investment of surplus funds.

2.2 Symptoms of Dutch Disease and Diversification of Economy

Since Mauritius witnessed a massive increase in revenues with the soaring price of sugar on the international market, the country would have been exposed to the threat of Dutch disease in the form of macroeconomic mismanagement. It would be instructive to analyse why these trends did not transform into a Dutch disease and how the sugar boom surpluses contributed to the development of other export sectors.

Any economy facing the Dutch disease would experience basically four main symptoms. The first is a decline in exports of the non-booming sector. Second, there is a fall in the output of the non-booming tradeable sector. Third, there would be a likely increase in the production of the non-traded goods. Finally, there would be an appreciation of the real exchange rate. In the Mauritian context, the economy was heavily dependent on the sugar sector. In the 1970s, sugar exports were on average about 80% of total export. Most of the exports of non-sugar tradeables (tea, textile yarn, clothing) in absolute terms exhibited an upward trend during 1970s. No spectacular stumble in exports was witnessed as purported by the symptoms of Dutch disease. Instead, the economy was diversifying. In terms of share of total export, sugar stood at 86% in 1974, but steadily fell to 64.9% in 1980. With an initial dip during 1973–1974, the share of the total non-booming trade was 6.04% in 1974 period, which gradually increased to peak at 23.98% in 1978, then started to decline.

On an individual basis, only the share of clothing in total exports exhibited a clear-cut upward trend. The share of tea, fish and fish preparations, and other manufactured goods in total exports slightly declined during the boom, but picked up quickly in the post windfall years. Going by the general trend, the second condition of Dutch disease also does not seem to hold. The EPZ sector grew by 197% over the 1976–1980 period. This expansion can be partly attributed to the windfall gains earned by the sugar industry during the boom years.

Table 6: Export of the tradeable sector

	1973	1974	1975	1976	1977	1978	1979	1980
Exports								
Sugar	608.1	1537.4	1548.8	1321.5	1428.5	1304.8	1590	2165.3
Tea	18.9	19.7	16	29.2	43.5	55.2	39.3	42.1
Fish and fish preparation	8	14.5	14.3	18.8	31.8	32.1	31.2	42
Textile yarn		1.8	1.7	17.2	55.9	38.7	48.4	57.9
Clothing	20.6	60.8	118.2	204.8	273.2	312.7	396.1	566.4
Other manufacturing goods	7.4	11.1	13.2	19.7	28.4	36.9	10.9	20.1
As a % of total exports								
Sugar	81.3	86.0	84.2	74.7	70.0	65.7	65.4	64.9
Non booming tradeable as % total export	7.34	6.04	8.89	16.37	21.20	23.93	21.62	21.82
Tea	0.025	0.011	0.009	0.016	0.021	0.028	0.016	0.013
Fish and fish preparation	0.011	0.008	0.008	0.011	0.016	0.016	0.013	0.013
Textile yarn	0.000	0.001	0.001	0.010	0.027	0.019	0.020	0.017
Clothing	0.028	0.034	0.064	0.116	0.134	0.157	0.163	0.170
Other manufacturing goods	0.010	0.006	0.007	0.011	0.014	0.019	0.004	0.006

Source: CSO, National Accounts.

The methodology used to compute GDP did not provide a decomposition of the agricultural and manufacturing sectors for the boom period. On the basis of gross figures, however, it should be noted that the output of the non-booming tradeable sector was expanding, for example EPZ output. Table 7 clearly suggests that the non-tradeable sector witnessed a growth. The other sectors, namely construction and restaurant and hotel also experienced a wide expansion. During the boom period, the construction increased by 90%.

Table 7: GDP by selected industry group (million rupees)

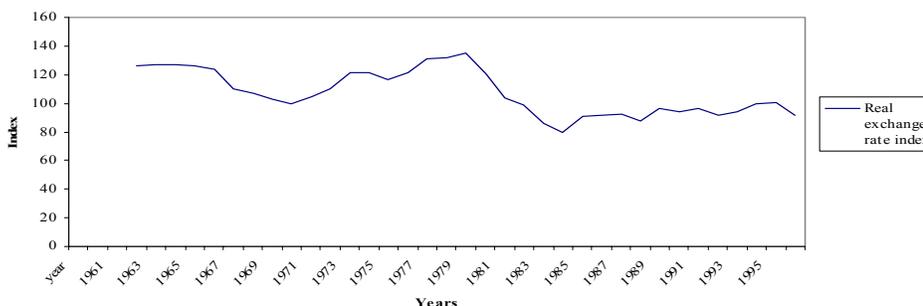
	1973	1974	1975	1976	1977	1978	1979	1980
Sugar				969	910	947	1229	776
Mining and quarrying	2	2	4	7	7	7	7	7
EPZ				108	130	156	223	321
Other				295	360	427	473	628
Construction	114	155	217	333	406	506	552	561
Restaurant and hotel				398	484	520	631	877
Wholesale and retail trade	172	221	279	398	448	444	471	462

Source: CSO, National Accounts

Figure 1 illustrates the real exchange rate index (RER) of the rupee. A rise in RER refers to an appreciation of the rupee, while a fall signifies depreciation. During the boom period, the real exchange rate depreciated. This depreciation stopped when the exchange rate regime shifted to the Special Drawing Rate (SDR) peg in 1976. With the new regime, the exchange rate appreciated till the devaluation in 1979. The exchange depreciated during the boom years and the signs of appreciation showed up in the post boom period after the change in the exchange rate regime. These developments contributed to increase in imports and slowing down of exports. The government policy of budgetary expansion to mitigate the unemployment problem added to balance of payments problems, which later led to structural adjustment with successive devaluation of the rupee. The upshot of the preceding analysis is that evidence on Dutch disease is mixed. In other words, growth of one sector is not founded

on decline of other sectors. This may be interpreted to mean that major sectors of the economy continued to coexist, providing baseline support to fast growing sectors.

Figure 1: Real Exchange Rate Index



2.3 FDI-Export-Led Industrialization

The real story of economic success started in 1983 when the newly elected government began working with a new economic policy to foster economic transformation by diversifying into manufacturing for export. The alternatives included (a) the purchase of new machinery and equipment and hiring consultants, (b) direct foreign investment (FDI), and (c) the purchase of new technology licences for domestic production of new products or the use of new processes. The adopted strategy was a mixture with a view to participate in the international best practice technology for the production of textiles and clothing, for which an EPZ was created. The open door policy consisted of unrestricted tariff-free imports of machinery and materials, no restrictions on ownership or repatriation of profits, a ten-year income tax holiday, a policy of centralized wage setting to ensure moderate wage increases and industrial peace. Thus, the tax-free zone was designed not as a geographical area but as an economic activity – textile and clothing manufacturing.

This package of EPZ was responded to by FDI from Hong Kong and a few other countries in a big way. An international technology transfer took place and local investors joined in the process. EPZ textile and clothing firms were largely owned by local investors (55%), followed by joint ventures (35%) and fully foreign owned (15%). The local investment was financed from the surpluses of the sugar sector, derived from the series of sugar booms beginning in the 1970s (for a good discussion of the sugar booms in Mauritius. The import of equipment and technical skill was supported by the availability of cheap labour and complementary policies.

Factors underlying FDI decisions to come to Mauritius can be grouped into two categories: FDI country specific and host country specific. FDI country specific factors have been discussed in the literature extensively (for an interesting survey, see Chen, 1992). In this approach, FDI decisions emanate from macroeconomic characteristics of multinational firms, which enable them to supersede the domestic market by transferring their technological superiority abroad at a very low marginal cost. This motivation also includes reasons forged by macroeconomic conditions to regain their international competitiveness by exploiting location specific advantages of the host country, such as low cost of labour.

Besides low labour cost and the EPZ package, there are two additional factors that contributed immensely to Mauritius’ massive manufacturing growth. First, Chinese population growth and the threat of expropriation by the mainland Chinese government in

Hong Kong in the case of investors from Hong Kong are considered to be decisive in explaining the arrival of FDI in Mauritius. Nevertheless, there was a second factor, seemingly the most important one: Mauritius was a country of origin that would not be subject to quota limits set by the EEC and the United States. Mauritius has been the beneficiary of trade agreements, such as the Lomé/Cotonou conventions (preferential access by Mauritius exports to the European market) and the Multi-Fibre Agreement (MFA; which has allowed Mauritius to build up its garment industry by restricting the clothing exports from mostly Asian countries). Thus, rich countries in the west constituted the market for exports from Mauritius.

It may be pertinent to note here that developing country multinationals tend to differ from Western multinationals in that the former have been found to derive their comparative advantage from smallness of scale, labour intensive technology and flexible product lines. In other words, competitive edge depended to a greater extent on relatively lower cost of production than on superior technology. In the Mauritian context, however, superior technology is also important because of the export orientation of FDI for the markets in those parts of the world where Western multinationals also operated. Although most of the manufacturing exports have been governed by the protected markets and conventions, the existence of developing country multinationals along with western multinationals in western markets ensured international best practice technology.

During the 1989–1991 period, however, the success of the EPZ was under clouds. The increase in productivity and income exerted upward pressure on wage levels. At the end of 1988, the granting of wage compensation to the public and private sector inflated the wage bills, with serious repercussions for the competitiveness of exports. With the heavy dependence of the EPZ on textile activities, the need for diversification was deeply felt. Recognizing the risks involved, the authorities promoted non-textile firms such as footwear, leather goods, jewellery, watches, clocks and optical products. These factors gave impetus to FDI activities from Mauritius to foreign destinations. EPZ firms started to relocate their plants in neighbouring countries such as Madagascar and Mozambique where cost of production is lower. The economy started to pick up in the post 1995 period. The EPZ sector was slowly moving towards investing in the manufacture of electronics and computer software.

The expansion of the value added through upgrading technology and/or diversifying the product range is vital. In other words, the best practice technology in this sector would warrant development of research and development (R&D) capacity and on-the-job training. According to IMF (2001) calculations, EPZ growth performance, unlike the aggregate growth rate, has been underpinned not just by rapid factor accumulation, but also by a very high rate of total factor productivity (TFP) growth. During the 1991–1999 period, 5.4% of the aggregate growth rate of 5.7% of EPZ was explained by TFP growth. In other words, capital accumulation has played a greater role in the economy as a whole, but TFP growth contributed more to EPZ growth. There is a need to shift the focus from conventional EPZ products to high-skill and high-tech textiles and apparels, and to diversify markets.

2.4 Diversifying the Industrial Base through SMEs

Small and medium enterprises (SMEs) provide a second line of defence for the EPZ sector in terms of employment, value added and exports. Only 7% of the sampled enterprises were shown to have a fixed capital of more than Rs5 million. A large number of SMEs are organized on an informal basis, and they present income and employment opportunities to many. About 80% of them are individual and partnership firms.

According to the Central Statistical Office (CSO) Census of Small Industries conducted in 1992, there were 40,947 small establishments including all types of units engaged in manufacturing, trade and services, with a total employment representing 24% of the labour force and 21% of GDP. In a short period of time, they have acquired some technical competence. Nevertheless, the lack of qualified maintenance staff, and high prices of imported spare parts were found to be one of the most critical issues, constituting an important barrier to investing in high and new technology by SMEs. The special needs of SMEs are market information, skills, management training, finance and technical support. The institutional support for the development of SMEs is provided by the Small and Medium Industry Development Organization (SMIDO), which is also responsible for promoting the exports of SMEs.

Credit has been used in the past, through Development Bank of Mauritius (DBM), to finance income-generating activities. When credit is used as a process that creates an environment that is conducive to income-generating activities, it attains a social dimension because it may reduce social inequalities. There is a significant gender implication of credit facilities. With rising female unemployment, credit-financed SME growth can be an important source of women's economic empowerment. The institutional inadequacy for financial support is basically due to cumbersome formalities and collateral obligations. Banks, including DBM, are not equipped to deal with small enterprises. There is great need to develop institutional capability to address the needs of SMEs in manufacturing, services and agriculture. The government has proposed to create a National Entrepreneurs Bank (NEB) to meet the credit needs of this sector. There may be a need to involve more than one or two banks and financial institutions in the job of providing credit to SMEs. In fact, multi-lateral lending can be more advantageous compared with bilateral lending since it allows cross checking and exchange of information.

In developing countries, where the cost of money is usually high, credit presents a natural bias in favour of high-yielding activities. Since SMEs have a significant effect on the income status of less rich segments of the society, it has been proposed that mixing credit with grants on an ad hoc basis may provide a way to allow the financing of potentially high-yielding activities. An example of this kind exists in the Mauritian EPZ sector. The Technology Diffusion Scheme (IDS) was set up to grant private firms half the cost of buying services for raising competitiveness, improved productivity, quality and design services, and information on new technology. It was expected that 359 EPZ units would use the scheme, at an average of \$10,000. Firms receive one grant for each service (they can avail of more than one grant for different services) and thereafter, they will have to pay the full market cost of the service. Several institutions were involved in technology support services, namely EPZ, MSB, SMIDO and MEPZA, but TDS aimed at promoting the use of technical consultancy services and making it acceptable by the industry. The government and the international community are also providing new stimulus for the development of SMEs and for promoting inter-firm networking with the EPZ sector.

2.5 International Tourism as a Balancing Sector

The tourist sector owes its creation to the vision of the Mauritian sugar tycoons who invested their windfall gains of the boom years in this sector. Despite a difficult start, tourism has been able to pave its way and established itself as the third pillar of the economy after the EPZ. In the early 1960s, there were only 10,000 tourist arrivals. The arrivals increased steadily over time and reached 656,450 in 2000.

The initial endeavour to boost this industry was the implementation of the first five-year development plan, 1971–1975. The government provided an array of fiscal and other

incentives to attract local capital and foreign investment in tourism facilities. It was only in the 1980s that the industry firmly established itself as the third largest foreign exchange earner, however. Over the period 1990–1998, tourism experienced an annual average real growth rate of 9.8%, while manufacturing and agriculture grew by 5.6% and 0.6%, respectively. As a percentage of total export, tourist earnings increased from 5.9% in 1975 to 14.9% in 1990 and 19% in 1998. The magnitude of the influence of the tourist industry on the economy depends on the retention of foreign currency in the country. The World Bank (1989) argued that the leakage is low, as most capital in the tourist industry was generated locally and also managed by locals. Even if some hotels are jointly owned, a joint venture between local and foreign investors, not all the profits are repatriated. There are other foreign currency outflows in the form of debt repayment and overseas marketing expenses. The success of the tourist industry is a remarkable achievement, which would not have been possible without the natural beauty of Mauritius, but also the marketing policies adopted by the government.

All these policies are indeed central, but there are other factors that have contributed to the success. A look at the landscapes of other African countries suggests they have more to offer to adventurous tourists than Mauritius. Yet notwithstanding the endowed natural beauty, their tourist industry is yet not thriving as in the Mauritian case. This can be explained only by the prevailing social and political stability in Mauritius, unlike other African counterparts, which have been the victims of frequent ethnic conflicts and treacherous leadership.

2.6 Further Diversification into Financial Services

With a view to set Mauritius on a higher growth path, the economy is being further diversified with emphasis on the services sector. Since the mid 1980s, financial activities in Mauritius have experienced a gradual shift away from the dominance of banks and insurance companies. A number of non-bank financial institutions have emerged to play a vital role in mobilizing savings, stimulating investments and providing financial support to other productive economic sectors. These include the Mauritius Housing Corporation, specializing in the provision of housing loans; the Development Bank of Mauritius (DBM), providing industrial loans; and the Mauritius Leasing Company (MLC), State Investment Corporation (SIC), Post Office Savings Bank, investment trusts, unit trusts and pension funds.

The Stock Exchange of Mauritius was set up in 1989, and since then has made remarkable progress. Furthermore, institutions like SIC, DBM and MLC have been privatized to permit their entrance on the stock exchange and compete with banks. The number of listed companies stood at 44 (including debentures) as at August 2002. Activities at the stock exchange showed a slight improvement over the past year. Market capitalization increased to Rs35.1 billion as at the end of August 2002 from Rs34.4 billion in the corresponding period in 2001. In dollar terms, however, the market capitalization declined to \$1.15 at end August 2002 from \$1.18 billion in the same period for 2001. The Semdex rose to 375.2 points in August 2002 from 365.7 in the same period in 2001. This performance was lower than in previous years, however, when the Semdex stood at 390.1 in 2000 and 435.6 in 1999. The Sem7, on the other hand, slipped to 81.7 in August 2002 from 83.1 in August 2001.

The quaternary sector, comprising the stock exchange, free port activities and offshore businesses, is now the fourth pillar of the economy. With an average annual growth of more than 10% over the past few years, its contribution to GDP has increased considerably to reach around 15% in 2001. The real output growth in the financial intermediation sector is estimated at 12.4% for 2001, supported mainly by the banking sector. The “business

activities” sector or the free port registered a slightly higher growth of 10.9% in 2000, compared with 10.7% in 2000. However, in 2002 a slight deceleration in the growth rate is expected for the financial intermediation sector while the free port sector will expand at the same rate as in 2001.

3. MACROECONOMIC POLICIES AND STABILIZATION

In the 1960s, the Mauritian economy was in dire straits with low level of income. As such, the state of the budget was not a reflection of the fiscal stance of the government. With the low income level, the government was unable to generate the required tax to instigate economic development. The imposition of the 5% export levy on sugar in 1961 was an attempt to boost the tax revenue. Ten years later in the post independence era the levy was raised to 6%.

This levy was indeed effective during the sugar boom years. As the sugar revenue soared, so did the tax revenue of the government. With the inflow of revenue, the government was able to expand public expenditure. The health and education sectors, water and sewerage, and low-income housing were the main beneficiaries of this expansion. The share of the budget allocated to social services also grew, from 40% in 1970–1971 to 52% by 1973–1974. However, the increase in expenditure outpaced tax revenue. In 1973 the 6% sugar export was replaced by a graduated tax. Planters exporting less than 20 tons were exempt from the tax, while estates that exported 5,000 tons or more were subject to the highest tax, initially set at 9%. The graduated tax scheme is presented in the Table 8.

Table 8: Sugar export taxes, by crop year, 1973, 1977 and 1979

Export volume (metric tons)	1973	1977	1979
Less than 20	0	0	0
20 or more, but less than 75	6	6	10.5
75 or more, but less than 1000	7	7	12.25
1000 or more, but less than, 3000	8	9	15.75
3000 or more	9	13.5	23.625

Source: Mauritius Chamber of Agriculture.

The mass of the population highly supported the graduated tax, since it was borne by the wealthy Franco-Mauritians. During the boom years, part of the profits of the sugar sector was channelled to the budget of the state. As the boom ended, the revenue generation ability of the graduated tax subsided. This induced the government, which badly needed funds to finance expenditure, to increase the tax, so that it became highly progressive as shown in table. The result of this tax policy was to impede the efficiency of the sugar estates, leaving them with high losses and subsequently decapitalized.

Notwithstanding the progressive tax policy, budget deficit persisted during the boom years. In the pre-boom era, the government had a budget deficit of Rs61 million, which further increased to Rs259 million by 1973–1974. The government resorted to domestic borrowing to bridge the deficit. The gap between expenditure and revenue further widened even after the boom years. Between fiscal year 1975/76 and fiscal year 1978/79 fiscal revenues rose by 33.2% and expenditures by 80.5%, while the consumer price index rose by 35.7%. By 1979 the fiscal deficit amounted to 13% and public debt to 48% of GDP.

The fiscal policy adopted by the then government was unsustainable. The government turned to the IMF and the World Bank for assistance. The two institutions were willing to extend credit, but they insisted that Mauritius curtail costly social programmes, return to

fiscal conservatism and remove controls. In 1979, the government adopted a fiscal stabilization programme in line with the prescriptions of the IMF and World Bank. Heavy use of direct tax hampered the growth of the economy. To remedy the situation, the tax policy was re-oriented from direct to indirect taxation in the early 1980s. The top marginal income tax rate slipped from 70% to 30%. In 1982, a new sales tax was introduced and indirect taxes were increased, while consumer subsidies were reduced.

Later developments include the introduction of a value added tax and a fiscal policy to keep a check on government expenditure with a view to monitoring budget deficit to GDP ratio. The government has produced a compensatory investment policy under which any lack of private investment in infrastructure development has been responded to by public investment. This approach to investment policy has major implications for economic growth, which would need more intensive analysis.

The instruments of monetary policy have been subject to changes through the different economic phases. The choice of monetary policy in developing countries is constrained by the degree of sophistication, stage of economic development and political system. Khatkate (1972) argued that that an early stage of economic development, increasing the stock of money becomes imperative to promote the shift from fixed assets to financial assets. At the outset, the direct regulation of credit and interest rates is the main instruments of monetary policy. As the economy transforms, a shift from direct to indirect controls is required to ensure the smooth running of the financial system. Examples of indirect controls are open market operations and moral suasion. In the Mauritian context, monetary policies initially consisted of direct controls and recently shifted to indirect techniques.

Since independence, the major objective of monetary policy has been to sustain growth by controlling inflation and monitoring exchange rate movements. Policies implemented through different economic phases were tailored according to the respective economic circumstances prevailing in each phase with the view of promoting economic growth. In the early 1970s, the objective of financial policy was the setting up of the minimum financial infrastructure to urge monetization and financial intermediation. At the early stage, reserve requirements, credit ceilings and administered interest rates were the main tools of monetary policy. A loose monetary policy was adopted to promote investment and economic growth. By the late 1970s this expansionary trend was reversed because inflationary pressures, the consequence of favourable balance of payments and rising aggregate demand. This aim of this policy shift was to remedy the macroeconomic imbalances in the economy.

Initially, commercial banks were required to maintain reserve ratios consisting of cash in their vaults or deposits at the Bank of Mauritius and non-cash liquid assets such as treasury bills, Bank of Mauritius bills and government securities maturing within seven years. In addition to influencing the credit creation capacity of commercial banks, the maintenance of cash and non-cash liquid asset ratios was for prudential control. Table 9 exhibits the variations in the reserve ratios since the late 1960's.

Table 9: Variations in reserve ratios, 1969–1997

Years	Cash ratio %	Liquid asset ratio %	Total reserve ratio %
1969–72	5		5
1973–74	8		8
1975–77	12		12
1978	12	13	25
1979–82	12	18	30
1983–87	12	20	32
1988	10	23	33
1996	8	20	28
1997	6	0	6

Source: Bank of Mauritius, *Annual Report*, various issues.

Table 9 shows a reserve ratio starting at 5% in 1969 and reaching a peak of 33% in 1988, subsequently slipping to 6% in 1997. This trend reflects the dynamic priorities, which are in line with the state of the economy. Initially, when investment was needed to boost the economy, the reserve ratio was indeed very low. As the economy expanded, the need to control credit creation simultaneously grew. This was mainly to counter inflationary pressure, but also to preserve the interest of the depositors. But in the 1990s, policy is moving back towards the initial level of the late 1960s, when the reserve ratio was very low. The difference now is that the financial system is being deregulated to provide the necessary springboard to foster economic growth.

Regarding the credit ceilings, they have been very selective. Introduced in 1973, they were initially restricted to the private sector, but extended to the whole of the private sector between 1974 and 1992. Non-priority sectors were subject to a sub-ceiling. The system of quantitatively controlling the availability and direction of credit has helped to attain the objective of price stability and sustain economic growth by ensuring the channelling of financial resources to the priority sectors. Credit ceilings on the priority sectors were lifted in July 1992 and virtually abolished as from July 1993. This indicates the transition of the financial system towards liberalization.

In the absence of a developed financial system, the direct regulation of interest rates was an important tool for monetary policy. Interest rate ceilings were imposed on lending and deposit rates of commercial banks. In addition, commercial banks have been pegging their interest rates to treasury bill rates and the bank rate fixed by the Bank of Mauritius. Given a period of high inflation and fixed interest rates, the financial system was repressed with negative real interest rates till the early 1980s. To overcome this depletion of real interest rate, deposit rates were increased to provide a positive real return on savings. Simultaneously, interest rate subsidies were provided to the priority sectors as a counter measure against any growth impediments in the economy. There was a shift towards the liberalization of the interest rates with the lifting of interest rate ceilings until finally in June 1998 interest rates were fully liberalized.

There was a clear shift from direct control to indirect market mechanisms such as open market operations and moral suasion in the 1990s. The development of a bill market became a major objective for the Bank of Mauritius. Treasury bills were auctioned from November 1991 and the Bank of Mauritius also introduced the Bank of Mauritius bills on tender. A Secondary Bill Cell was set in February 1994 as a measure to further ignite the bill market. Since July 1995, the bank rate has been linked to the latest average bill rate to move closer to a market-determined interest rate. The measures adopted were mainly gearing towards achieving macroeconomic stability through growth promotion, price stability and achieving a sound balance of payments position.

4. TRADE POLICY REFORM AND GROWTH

It is recognized that trade policies have been crucial in promoting the growth of the Mauritian economy. These policies comprised measures of import substitution, export-promotion assistance for manufactured goods and non-traditional agriculture, and export taxation of traditional exports (sugar) (Table 9).

Signs of trade liberalization were seen only after 1979–1983, the period of macroeconomic stabilization and exchange rate adjustment. The concern in this period was some liberalization of foreign exchange, import licensing restrictions and reform of the border taxation of imports. The main phase of import liberalization and reduction of

protection for local came in the period 1985–1987 with the progressive dismantling of quantitative import restrictions. In 1987, the government reduced the maximum tariff rate to 110%, except for petroleum, tobacco products and alcoholic beverages. Major tariff reductions took place in 1988, when fiscal and custom duties were abolished on a large number of commodities.

Table 9: Trade policies

Sector	Main form of assistance
Manufacturing Import-substituting Large new activities (e.g., foodstuffs), assembly of colour televisions	Development certificates scheme, tariff and import and quota protection
Other	Import licensing and tariff protection
Export-oriented Wholly (e.g., knitwear) Partially (e.g., furniture)	Export enterprise certificate scheme Tax rebate based on export growth
Agriculture Sugar – large growers Sugar – small growers Rice	Tax of 23.65% on gross export receipts Subsidized exchange rate and subsidy payments on rice
Other agriculture	

Source: Dabee and Milner (1999).

The process of trade liberalization was viewed as credible because of the availability of information. Government kept informing economic agents about the reform process; for example, the rising level of foreign exchange reserves was frequently advertised to increase confidence in the economy. Yet, the government was cautious about the liberalization process. It was not fully submissive to the World Bank, which was expecting a reform of the tariff structure to follow the removal of quantitative restrictions. The government argued that any further liberalization would be unsustainable as the balance of payment and budget deficits would burst out. Signs of liberalization resurfaced in July 1994, when a major tariff restructuring was introduced. In this year, fiscal duty, custom duty and import levy were merged into one duty, the custom duty. The maximum rate of the three tariffs, which had averaged 600% before the reform, was reduced to about 80% with the custom duty. In the same period, duty rates slipped from 60 to 10.

Trade liberalization refers to the action of making a trade regime less restrictive. Greenaway (1998) argued that it embraces a wide menu of policy reforms and includes any policy reform that unambiguously moves the relative prices of tradeables towards neutrality. The primary objectives of trade liberalization are to promote exports and growth, and to improve the balance of payments.

There have been attempts to assess empirically the impact of trade on employment and wage (see Milner and Reed, 1997; Milner and Wright, 1998). Milner and Wright (1998) analysed wage and employment dynamics in import-oriented and export-oriented manufacturing sectors in the Mauritian context using panel estimation techniques. A priori expectations were that wages and employment would rise in exportable sectors and would fall in importable sectors owing to output changes. The results only partially supported these posited expectations. Employment in exportable sectors rose in response to trade liberalization. Surprisingly, in the short run real wage growth unexpectedly fell in exportable sectors. On the other hand, employment and real wages expanded in importable sectors following liberalization. Milner and Wright concluded that the most likely explanation for the unexpected results was that labour supply was not fixed. A very large increase in the

labour supply occurred, with more women working in the EPZ. This allowed employment in importables to be maintained as the exportable sector expanded. It also allowed EPZ wages to be restrained.

During the period of trade liberalization (1985–1987), the economy indeed experienced a high growth rate. The relative importance of the manufacturing sector as well as activities in the EPZ grew significantly over this period. Furthermore, output, trade and employment witnessed tremendous changes due the liberalization process. The share of employment in the manufacturing sector grew significantly. This growth coincided with the start of the liberalization process. Between 1983 and 1984, total manufacturing employment rose by over 25%. It should further be noted that the clothing and textile industry was the major sector experiencing the transformation. Employment in this particular grew overwhelmingly, from 20,000 in 1983 to over 80,000 in 1988. Another alteration was the increasing participation of women in the labour intensive production of textile and clothing. There was also some redistribution of labour from agriculture to manufacturing. The effect of trade liberalization was mainly in terms of a drastic fall in the level of unemployment rate in Mauritius, which was beneficial to the economy as a whole. This trend reversed in the 1990s, however. A decline in EPZ employment was observed. Problems in the recruitment of skilled and semi-skilled workers gave way to more capital intensive techniques in production. Furthermore, upheaval in the international market led to the closure of several textile units in Mauritius, aggravating the already critical situation.

During the liberalization period, real wages in both the manufacturing and EPZ sector increased. It should noted, however, that average wages in the EPZ were less volatile than in the total manufacturing sector, implying that wages in the import competing sector were subject to more variation and higher than those in the EPZ sector. It should further be noted that increases in real wages were not matched by productivity growth during the second half of the 1980s in the manufacturing sector. Real wages were rising while labour productivity was declining because of high rates of absenteeism, high rates of turnover and poor work discipline, among others. This indeed eroded the competitiveness of Mauritian exports on the international market. Trade policy reforms have taken place over different phases and would require a detailed analysis to determine their implications for growth.

5. PERFORMANCE OF MARKETS

Market performance must be viewed in terms of labour trends, as well as product markets and the responses of households and firms.

5.1 Trends in the Labour Market

We examine the labour market in terms of employment levels, wages and productivity, and present an empirical model of the EPZ labour market.

Trends in Employment

Given that immigration has been negligible in Mauritius, the growth of the labour force can be explained in terms of natural population growth and an increase in the activity rate. In 1970, the population of working age was rising at an increasing rate, which was the logical result of the baby boom of the 1950s and 1960s. Further, the activity rate increased from 52% to 61% during 1972–1990. The rate marginally declined from 83% to 82% for males, but increased rapidly from 21% to 40% for females (Table 10).

The problem of unemployment continued to be explosive and most employment was concentrated in agriculture. This trend continued until 1983, when a perceptible shift in the level of employment and its structure was witnessed. This raised employment rate from 80% in 1983 to about 95% in 1990. Unemployment declined further to less than 2% in 1993, which means that rate of job creation was higher than that of labour supply (Table 10).

Table 10: Labour force and employment trends (thousand)

Year	Labour force		Employment		Unemployment rate (%)		Total
	M	F	M	F	M	F	
1972	215	54	177	46			
1983	269	96	217	76	19.3	20.8	19.7
1985	280	119	259	100	14.3	16.0	14.8
1990	306	151	297	148	2.9	2.0	2.1
1993	321	168	315	165	1.9	1.8	1.8
Period	Growth rate				Activity rate (15+)(%)		Total
	M	F	M	F	M	F	
1972–1983	2.1	5.4	1.9	4.7	83	21	52
1983–1990	1.9	6.7	4.5	10.0	80	28	54
1990–93	1.6	3.6	2.0	3.7	82	40	6

M = Male F = Female.

Source: MEPD, Economic Indicators.

Moreover, a dramatic drop in agricultural employment from 35% in 1970 to 15% in 1993 was recorded, which was responded to by manufacturing sector employment growth (MEPD, Economic Indicators). “Services”, however, maintained a high level of about 40% of total employment over a long period of time. While the female activity rate increased in general, it increased rapidly in the secondary sector, mainly in EPZ establishments followed by construction activity. It is pertinent to note that the employment capacity of the large manufacturing sector remained high, accounting for about 655 in 1986 and 60% in 1990.

Trends in Wages

All sectors in the economy experienced phenomenal increase in wages during the process of economic transformation; the manufacturing sector, comprising mostly sugar export mills and EPZ firms, witnessed the highest growth (Table 11). Services maintained the highest wage levels, followed by community and government services, manufacturing, and agriculture. It is worth noting here that the rapid rise in wages in the manufacturing sector did not occur at the expense of other sectors. Given that the relative decline of agriculture has been caused by intensification of the field mechanization and automation of factories, this did cause significant increases in wages in agriculture as well. Further, the growing competition for labour and the presence of labour market policies and institutions exerted an upward pressure on wages in all sectors. In fact, inter-sector disparities in wages declined rapidly in 1984 and did not show any significant change (Table 12). These facts would contribute to the contention that wages in the manufacturing sector did not grow at the expense of other sectors. In other words, the growth of wages in manufacturing derived its source independently.

Table 11: Trends in wages (large establishments)

Rupees per month

Year	Agriculture and fishing	Manufacturing	Services *	Community, social, govt. & personal services
1975	333	305	693	552
1980	781	746	1708	1301
1985	1399	1778	2691	2151
1990	2331	3105	4377	3893
1993	3152	4437	6237	4898
1994	3540	5203	6808	6434
Growth rate (%)	13.2	16.1	12.8	13.8

* Comprises wholesale, retail trade, restaurants and hotels, transport, storage, and communication, finance and insurance, real estate and business services. It excludes community, social, government and personal services. Source: CSO, Annual Digest of Statistics.

In wage policy formulation, government attempted to combine both economic and political considerations. There exists an elaborate administrative arrangement for wage fixation with several bodies advising government on wage policy matters and industrial disputes. These bodies include Pay Research Bureau (for the public sector), National Remuneration Board, Permanent Arbitration Tribunal and a Tripartite Committee. It has been noticed that supplementary wage increases coming from National Remuneration Board recommendations have been implemented, which were over and above the award emanating from the Tripartite Committee. This system works for both public and private sectors. The working of the wage system has promoted competition among different government and parastatal bodies, on the one hand, and, on the other, between the public and private sectors to obtain higher awards. The general approach is to compensate labour for the rise in the cost of living.

Table 12: Disparities in wage rates (standard deviation of log of earnings)

Year	Inter-sector	Intra-sector (Manufacturing)
1980	0.418	0.267
1984	0.232	0.305
1988	0.250	0.261
1992	0.247	0.221
1993	0.252	

Source: Computed on the basis of data from Bank of Mauritius Annual Reports and ILO *Yearbook of Labour Statistics*.

Trade unions are also powerful in the wage setting exercise. There are 300 unions in Mauritius. They tend to exert their pressure through governmental channels. Minimum wages have been fixed, but these are not relevant at least in the modern sector where wage rates are already high. The system of bonus equivalent to one month's salary, and overtime payments structure both in EPZ and non-EPZ industries contributed to rapid growth of the labour cost. Non-wage labour payments seem to be significant in the private sector, for which not much information is available. Further, there is an elaborate system of social security to which both

employees and employers contribute. Price controls of wage goods, namely rice and flour, would also have repercussions on wages.

Sluggish Labour Productivity

The rising trends in wages were quite independent of labour productivity outcomes; labour productivity lagged behind real wages in manufacturing in general and EPZ in particular (Table 13). The sluggish trends in labour productivity in the manufacturing sector would seem to be more pronounced, when supply of capital is also taken into account. A comparison of growth rate and investment rate in selected countries would be revealing for declining labour productivity.

In Table 14, it can be noted that when compared with Mauritius, higher growth rates were achieved by lower or equal investment rates in countries such as Taiwan, Korea, Malaysia and Thailand during 1987–1991. On the basis of these figures, it may be argued that a growth rate of 5.8% in Mauritius can be explained more in terms of supply of capital and less in terms of labour productivity. That is, labour was complemented by higher availability of capital. The share of EPZ investment in total manufacturing investment, in fact, rose during a short span of time, from 12% in 1982 to 45% in 1985. In other words, higher availability of capital per labour has not been accompanied by any perceptible improvement in labour productivity.

Table 13: Real wage, productivity and export price, manufacturing sector: Base 1982

Year	Real wage index	Labour productivity index	Employment index	Export price index
1983	101	96	104	107
1984	101	90	126	119
1985	98	90	163	136
1986	105	80	205	144
1987	111	77	238	161
1988	120	77	254	173
1989	128	77	259	192
1990	120	79	261	216
1991	133	85	264	230
1992	138	87	261	246
1993	133	94	254	268
1994	145	101	254	276

Source: Bank of Mauritius Annual Reports; CSO, Annual Digest of Industrial Statistics.

Table 14: Comparing growth rate and investment efficiency (%), 1987–1991

Country	Growth Rate	Investment Rate	ICOR
Mauritius*	5.8	29.9	19.4
Korea	9.7	33.3	29.1
Malaysia	8.1	29.3	27.6
Taiwan	7.9	22.3	35.4
Thailand	11.5	32.2	35.7

* 1988–1992.

Source: NEDC (1994).

Studies have shown that in some countries, namely, Austria, Sweden and Singapore, central government regulations and planning mechanisms have been established to achieve cooperation between government, business and trade unions with a view to controlling wage

increases broadly within what can be afforded as a result of productivity increases (For a good discussion of these issues, see Ramasawmy, 1994). In some other countries, namely Japan, Switzerland and the United States, with less unionization and institutional intervention, wages have tended to be determined through market forces, which are considerably affected by productivity changes. Mauritius would constitute a third category of countries having an intermediate position, which would lack both the regulation of the first group and the flexibility of the second group. What we have then is that trends in wages, productivity and growth would not be properly aligned.

An Empirical Model of the EPZ Labour Market

Economic theory of wage determination in a neoclassical framework posits that any attempt to interfere with market forces to fix wages higher or lower than the market clearing wage would tend to reduce employment and growth. Higher and lower wages would reduce demand for and supply of labour, respectively, resulting in low level employment equilibrium. This theoretical position has nonetheless been refuted by the Mauritian success story. Wages increased remarkably, leaving labour productivity behind, at the same time increasing the employment rate. This happened as a result of labour-market policy support in conjunction with firms' enhanced ability and willingness to pay higher wages due to protected export markets. In neoclassical terminology, factors such as protected markets and labour market intervention would indeed be termed as distortions. Nevertheless, these distortions, more particularly the protected export markets, would bear significant implications for the process of wage formation and employment creation.

We assume that in a well-integrated labour market, as is obtained in Mauritius, the degree of unionization will be very high in export firms. We further assume that firms and unions play a cooperative game to achieve the highest possible joint rewards, which are then distributed between them according to their bargaining powers (see Hirsch and Addison, 1986; Farber, 1996; Laidler and Estrin, 1989). The firm's threat point is its shutdown level of profit, π_{\min} , equal to zero, while the union's threat point is a combination of wage (w) and employment (L), which ensures minimum utility, U_{\min} . The trade union preferences are specified as the following Stone–Geary function:

$$[U(w, L) - U_{\min}] = (w - w_a)^\gamma L^\theta \quad (4)$$

where γ and θ are weights accorded by the union to wages and employment respectively, and w_a is alternative wage rate. The Nash solution to such a game is provided by the maximisation of the product of the union's and the firm's utility increments above their respective threat points. The Nash product of utility increments can be written as

$$N = [\pi]^\mu (w - w_a)^\gamma L^\theta \quad (5)$$

The relative bargaining power of the firm as against the union is represented by the parameter, μ . Maximising N with respect to wages and employment and simplifying yields the following first order condition

$$w = w_a + (\gamma / \mu) \pi / L \quad (5)$$

$$(\text{mrp}) - w = - (\theta / \mu) \pi / L \quad (6)$$

Combining these equations will give the contract curve for firms and trade unions:

$$[(\text{mrp}) - w] = - (\theta / \gamma) (w - w_a) \quad (7)$$

which can be rearranged to the following convenient form

$$w = [\gamma / (\gamma - \theta)] (\text{mrp}) - [\theta / (\gamma - \theta)] (w_a) \quad (8)$$

This shows that wage rates in the manufacturing sector will depend on marginal revenue product, mrp , alternative wage rate, w_a and relative weights assigned to wage and employment in the trade union's preference function, which are respectively given by γ and θ . Alternatively,

$$\begin{aligned} w &= F(\text{mrp}, w_a, \gamma / \theta) \\ &= F(\text{MP}_L * \text{Px}, w_a, \gamma / \theta) \end{aligned} \quad (9)$$

where mrp is obtained by multiplying marginal product, MP_L with export price, Px . If alternative wage rate is taken to depend on the level of economic activity in the non-manufacturing sector, particularly agriculture, in our model, real wage would depend on labour productivity (LP), a measure of MP_L , export price (Px), share of agriculture in total value added (SA), and the parameters, γ and θ . The first two variables, LP and Px , capture the labour demand factors, and SA is a channel for labour supply, which is produced by the decline of agriculture. We assume that the relative weight assigned to wage vis-à-vis employment, γ / θ is given.

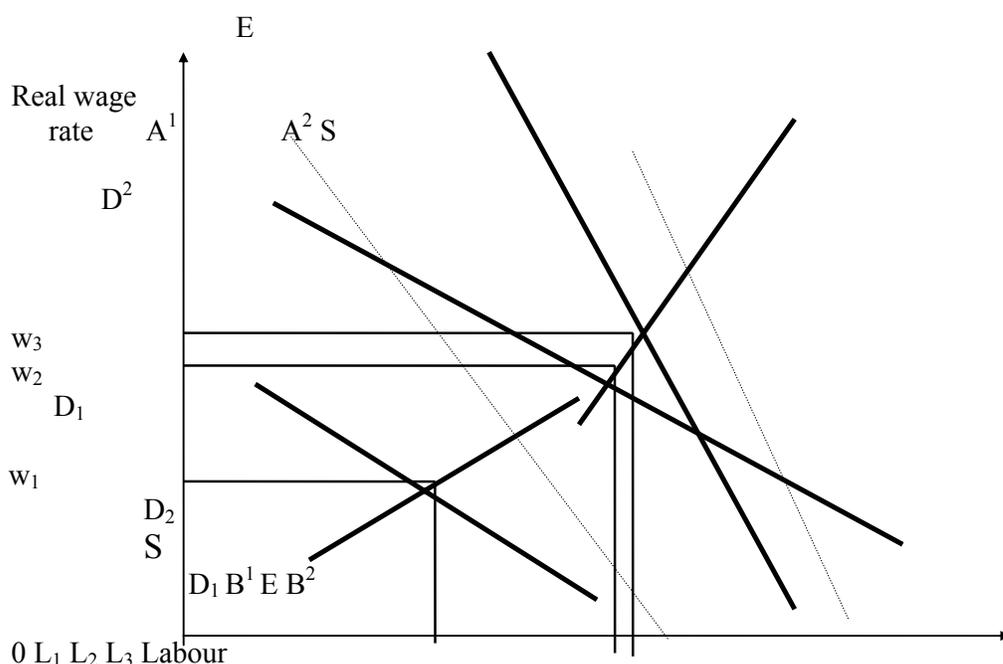
These relations can be expressed in the following Cobb–Douglas form:

$$\begin{aligned} \text{RW}_t &= A \text{LP}_t^a \text{Px}_t^\beta \text{SA}_t^\gamma e^{u_t} \\ \text{or } \ln \text{RW}_t &= \ln A + a \ln \text{LP}_t + \beta \ln \text{Px}_t + \gamma \ln \text{SA}_t + u_t \end{aligned} \quad (9)$$

where A is a scale parameter and u_t is an error term. A decline in labour productivity would tend to reduce real wage; higher export price will increase real wage and non-manufacturing or agricultural growth would increase real wage in manufacturing.

Since labour supply is given, the developments in the labour market would affect labour demand systematically to raise the level of wage rate. In order to capture these impacts, we have used a variant of the Lewis–Fei–Ranis model in which labour demand curves would witness non-parallel shifts. In other words, labour demand elasticity would vary with wages. The geometrical exposition of the proposed model is given in Figure 2. The relationship between real wages and labour demand is shown by D^1D^2 . The labour demand curve shifts inward to A^1B^1 as productivity declines. But export price growth pushes the labour demand curve outward to A^2B^2 . These shifts in the labour demand curve indicate that for a given level of employment, lower and higher real wages, respectively, would prevail, depending on whether the labour productivity effect or the export price effect is dominant.

Figure 2: An empirical model of EPZ labour market



The net influence of the two effects is given by EE, which shows that labour demand becomes less elastic with respect to wage increases. SS represents supply of labour. The supply curve is taken to be a relatively steeper line to indicate a situation of near full employment. This is captured by a kink in the labour supply curve. This shape of supply curve also indicates that since other sectors compete for labour in the same labour market, the availability of labour becomes highly constrained. The intersection between the net labour demand curve, EE and the labour supply curve, SS, would yield wage levels higher than those obtained with the more elastic labour demand curve, D₂D₂. Thus, higher real wages owe their origin to the positive manufacturing (export) growth effect outweighing the negative labour productivity effect on wages. Moreover, there is an increase in the level of employment, although this employment impact is minimal.

With a view to empirically verifying the foregoing assertions, the model described in Equation 9 is estimated using the OLS method. This exercise is conducted for the manufacturing sector. The variables are real wages (RW), index of export price (Px), index of labour productivity (LP) and share of agriculture in total value added (SA). The data pertaining to the period 1982–1997 were used. Tests for stationarity and cointegration were performed to test the time series properties of data. The data measuring the variables in the model are found to be non-stationary and not cointegrated (See Appendix A for the diagnostic tests). For the present exercise, we have obtained OLS estimates using the variables in log form. The results are reported below.

$$\begin{aligned} \ln RW &= 8.69 + 0.19 \ln Px - 0.12 \ln LP - 0.67 \ln SA \\ (t\text{-ratio}) &(2.37) (-0.91) (-3.08) \\ (\text{Prob.}) &(0.000) (0.035) (0.009) \end{aligned}$$

$$\text{Adjusted } R^2 = 0.94 \quad F(3, 12) = 86.14 \quad DW = 1.63$$

The results confirm the contention of the model that export price is the major source of increase in real wages in the manufacturing sector. Moreover, this development is independent of labour productivity behaviour. The negative sign on the labour productivity variable indicates that wages have increased even when labour productivity declined or stagnated. This result is statistically insignificant, however. The negative sign on the share of agriculture demonstrates that the relative decline of this sector improved the prospects for labour supply in the manufacturing sector, engendering a dampening impact on manufacturing wages. In other words, the decline of agriculture caused by increased capital accumulation and technical change, as discussed earlier, released labour employed in the sector for other uses. This surplus labour coupled with increased female participation in the industrial labour force had a dampening impact on wages in the EPZ sector. Given that the import of labour has been minimal, the role of the agricultural labour surplus assumes considerable significance for EPZ growth. It is important, however, to recognize that a large part of the increase in wages is explained by higher profits of export firms due to protected markets for their products in the foreign markets.

5.2 Product Market

The product market in Mauritius consists mainly of domestic production and imported finished goods and raw materials. Domestic production is divided between the export industry and the domestic market, which are sensitive to prices of locally available and imported raw materials. As such, the product market seems to be highly exposed to sectoral trade policies, through imports of raw materials for domestic production and finished imported goods for local consumption. Furthermore, Mauritius is an island open economy with a very small internal market size. The smallness of the economy comes along with various constraints, such as the inability to achieve economies of scale, limited competition, existence of monopolies, and concentration of financial and economic power. The impact of these constraints is deeply felt on the product market through pricing policies.

The provision of subsidies is one of the main measures used by the Mauritian government to control the prices faced by consumers in the domestic market. Imports currently subject to price control include rice, flour, cement, cooking gas, onions, iron and steel bars, petroleum products, edible oil, and salted fish. The government controls prices and/or mark ups on a limited number of goods. Maximum mark ups apply to refrigerators and certain appliances, tires, pharmaceuticals, sporting goods, tiles, crash helmets, glass panes, plywood, sanitary wares, textbooks, timber, prawns and shrimps, infant milk powder, and fresh fruits. Mark up limits vary between 20% and 50%.

Agriculture, although declining in share, remains one of the major domestic production sectors for local consumption as well for exports. Measures to control the price level have been implemented by the government. Domestic production is being subsidized at either the input level or output level, but the aim to control the price level remains. The 1988 Sugar Efficiency Act is one of these measures. The Act has also played a role by promoting sugar and non-sugar agriculture. It provided for a land conversion tax on the use of agricultural land for other purposes, and tax rebates for cultivation of crops other than sugarcane. Other incentives available to producers of agricultural goods included the Agricultural Development Scheme and the Technology Diffusion Scheme. The Freight Rebate Scheme is also available to exporters of selected agricultural products. Furthermore, import, export and price controls are maintained for food security purposes. Strategic reserve stocks are required

on certain agricultural products. Public enterprises, including marketing boards, still hold a monopoly over the importation of certain food products, including flour and certain rice.

These measures look like pro-consumer policies, but are also affecting the level of output. The government is using a mix of export price and import price policies to provide the apt economic environment conducive to output and export without jeopardizing price stability. The high output price policy of the agricultural household model seems to prevail in Mauritius, whereby incentives are provided to increase output followed by positive repercussions on both domestic consumption and exports.

Response by Households

In any society the consumption pattern follows the same trend as the level of economic development. Changes in consumption are a slow process over time. In the Mauritian society in particular, the rapid economic development induced changes in the consumption habits of the population, owing to the increasing availability of a wide range of new products and the increase in disposable income. The evolution of consumption patterns in Mauritius is a mirror image of the path of economic development.

In all consumption surveys carried out, “food and non-alcoholic beverages” is the commodity group that has attracted the most expenditure of the households. The relative weight given to food and non-alcoholic beverages remains most important in contrast to other commodity groups, but it declined steadily over the years from 50% in 1961 to 40.6% in 1991/92. The second most weighted commodity group is housing and household operations, 11% in 1961, 10.5% in 1975, 12.9% in 1980/81 followed by a hike to 24% in 1986/87 and ultimately falling to 13.5% in 1991/92. These consumption pattern changes are summarized in tables 15 and 16.

Table 15: Evolution of consumption patterns (1961–1992) constant values

Major commodity group	Average monthly household expenditure				
	1961	1975	1980/81	1986/87	1991/92
1. Food and non-alcoholic beverages	144.6	295.4	869.10	1,158.26	2,121.98
2. Alcoholic beverages and tobacco	21.38	39.46	130.46	133.74	297.38
3. Clothing and footwear	37.37	84.52	214.36	232.41	476.17
4. Fuel and light	10.77	27.46	131.02	156.78	280.58
5. Household and household operations	23.8	104.52	232.59	741.09	708.91
6. Medical care and health care	6.5	19.45	65.83	83.17	192.2
7. Transport and communication	16.82	48.26	226.21	256.59	522.57
8. Recreation and entertainment	11.85	32.82	62.36	166.22	357.84
9. Miscellaneous goods and services	13.71	64.37	140.79	106.79	267.75
TOTAL	286.8	716.29	2,072.72	3,035.05	5,225.39

Source: Household Budget Survey (July 1991–June 1992).

The basic source of the drive towards higher consumption is part of the character of the Mauritian culture. A rising standard of living is one of the major goals of each and every society. Much of the public policy and the initiatives of the private sector, which are complements, are geared towards this end. Thus, consumption patterns over the past 30 years can be conceived of not as a part of the way of life, but as an adjustment process.

Table 16: Average monthly household expenditure on specific commodities, constant values

Commodity	1961	1975	1980/81	1986/87	1991/92
Bread	9.2	14.48	50.5	71.55	106.07
Rice	33.12	38.5	69.4	96.53	70.23
Flour	3.79	7.10	20.8	24.05	15.37
Prepared meals	1.63	6.3	44.92	78.23	44.6

Beef	6.73	13.8	17.28	27.44	104.77
Fresh chicken	0.67	6.79	4.22	8.10	25.73
Frozen chicken			42.15	50.74	122.08
Frozen fish			13.91	27.58	58.77
Fresh milk	7.49	6.77	9.97	16.53	21.85
Powdered milk	2.03	16.55	41.71	70.61	131.81
Confectionery	0.59	0.93	8.57	11.59	59.5
Soft drinks	2.64	11.29	56.24	55.76	94.04
Alcoholic bev	8.74	24.4	76.73	82.9	195.19
Electricity Char.	3.4	12.41	69.42	94.84	146.77
Cooking gas			4.82	15.04	109.59
Furniture	0.77	6.51	29.07	32.34	72.38
Furnishings	0.65	2.61	13.89	8.58	44.2

Source: Household Budget Survey, July 1991–June 1992.

An adequate analysis is required incorporating all the factors that have contributed to changes in the consumption pattern including those induced by exposure to new products. Some sociologists who studied the modernization process of developing countries argue that economic variables are not the sole determinants of consumption patterns, but rather the structural transformation of the economy coupled with economic change could be more important. The modernization theorists' approach suggests that changes in taste are isolated from any other accompanying (psychological and socio-cultural) changes, but sociologists also tend to view all these various dimensions of change occurring simultaneously and often inextricably – what is popularly referred to as a “modernity syndrome”. What determines modernity is an important question. Inkeles and Smith (1974) sought to identify the factors influencing modernity in six developing countries. They found that education, experience in a modern large-scale factory and exposure to mass media seemed to be the most important factors.

Response by Firms

Firms have always been sensitive to public policies. In fact, the intent of such policies has always been to provide a conducive environment for the expansion of output. In the early development phase, the private sector reacted promptly to the import substitution measures of the government. Unfortunately, it was not as successful as initially expected because of the exiguity of the Mauritian market. But as the economy experienced the boom years, the private firms were adjusting to change in output structure but also responding to the needs of the citizens (consumers). The adjustment is reflected through the diversification of the economy towards the EPZ and the tourist sectors where the private firms had a higher stake. The response to the needs of the population is seen by the availability of commodities on the domestic market. In fact, the reaction of the private firms to government policies has been a key contributor to shaping the economic success of the Mauritian economy.

6. POLITICAL DEVELOPMENT AND SOCIAL POLICIES

Mauritius achieved independence in 1968, but the struggle of the political parties started much before. The constitution was introduced in 1885. At that time there were two political parties. However, only by 1936 did mass political participation begin, with the establishment of the Labour Party, which was based on the model of the British Labour Party. It was not long before the Labour Party gained much importance in Mauritian politics.

In the election of 1963, the Labour Party under the leadership of Sir Seewoosagar Ramgoolam obtained 40% of the vote. In contrast, the Parti Mauricien Sociale Democrate

(PMSD), the only opposition to independence, won 20%. Mauritius eventually achieved independence on 12 March 1968, six months after the sweeping victory of pro-independence parties (Labour Party) with 56% of the vote in the 1967 election.

6.1 Political Evolution

Along with this achievement, however, emerged several social and economic problems. The then ethnic conflicts, emergence of a left wing challenge, deteriorating terms of trade, and rapid growth of the population and labour force represented serious impediments to achieving economic development. The outbreak of conflict between Creole and Muslim led to the creation of alliances between secular and ethnic based parties, an initiative of the Labour Party to preserve national unity. It should be noted that parties sharing different views before independence joined hands amidst post independence conflicts to preserve unity. These were the early signs of patriotism. The rising of the left wing party, the Mouvement Militant Mauricien (MMM), comprising younger members and rebellious trade unions in the General Workers' Federation, was a significant source of instability to the government, however.

The revolt emanated from the discontent of the population against the political power in place. Despite being freed from the claws of the colonizers, the majority of the population was still living in poverty in contrast to the lavish lifestyle of the minority, the white people. Unemployment was on the rise with the maturation of the postwar baby boom. Yet the government pursued much the same policies as it had in colonial times. Responding to the social crisis, the government jailed the rebellious leaders, banned public meetings and called off the 1972 general election. The democratic system was temporarily suspended to preserve stability.

This period of political instability coincided with the sugar boom years. The policies implemented by the Labour Party and its allies during the boom years was in line with the ideology of the MMM. A series of measures aimed at improving social services, education and conditions of work was adopted. The breaking up of the government as a result of divergence in foreign policy issues led to a forced general election in 1976. But because of populist policies during the boom years, as well as the pledge to continue these policies in the course of the campaign preceding the 1976 election, the Labour Party obtained enough seats to form another coalition government to remain in power. Still, the MMM came up the single largest party and firmly established itself as a major force. The populist policies of the government during the 1976–1979 period depleted available resources, leading to economic downturn. To remedy the situation, retrenchment policies were implemented under pressure from the IMF and the World Bank, which gave the opposition grounds to indict the government for selling out to international institutions.

Caught up in economic turmoil, the Labour Party began losing support from the public, and the MMM appeared to be the solution. From the left wing, the MMM moved towards more moderate approaches, which enabled an electoral alliance with the Parti Socialiste Mauricien (PSM), a moderate, predominantly rural Hindu group and the labour party in September 1979. The new alliance promised to increase employment, raise minimum wages and provide more welfare. Policies pertaining to socialism were limited to a wealth tax that would affect only a small group of the very rich, the nationalization of two money-losing sugar mills, and the acquisition of 50% share in the hotel industry. Furthermore, the promotion of free enterprise and attraction of foreign investment were among the promises of the MMM.

The MMM and the PSM had a sweeping victory in the 1982 election, leaving no parliamentary seats for the opposition. Once elected, the new government focused on

macroeconomic management and postponed the nationalization pledges. With these moderate views, the MMM was able to gain the support of the citizens, but these turned away the party's more radical elements. Measures such as a proposed reduction in rice and flour subsidies and a contemplated reduction in sugar export taxes caused widespread discontent, however. Personality conflicts and ethnic friction worsened the whole situation, leading to the break up of the coalition after nine months in power. The MMM under the leadership of Paul Berenger joined the opposition bench. The then prime minister, Aneerood Jugnauth, formed a new party, the Mouvement Socialiste Mauricien (MSM), which comprised his MMM followers (mostly Hindu) and the PSM.

In 1983, the country went back to general election. For this election, the MSM formed an alliance with the Labour Party and with the PMSD. The supporters of the MMM now consisted of urban, mostly Muslim workers, but most of the support came from the poorer and the more radical members of the island's ethnic groups and intellectuals. The MMM won 46% of the popular vote, but it received only 22 parliamentary seats, leaving 48 for the MSM and its allies. The ruling coalition, headed by Aneerood Jugnauth, represented a wide spectrum of political opinion that was affected by personal enmities and in later years by scandals. Yet, despite these divergences, the coalition survived. Increasing prosperity in the country sustained the political survival of the alliance.

In 1987, the same alliance again won the election under the leadership of Aneerood Jugnauth. The latter remained in power till 1995, after winning election in 1991 also. In 1991, Aneerood Jugnauth formed an alliance with the MMM, but they parted ways with a second split midway through their five-year term. Surprisingly, the MSM lost elections in 1995 owing to ethnic reasons, in spite of a good economic track record. Another reason explaining this defeat is the alliance between the Labour Party and the MMM. The MMM spent most of its existence in opposition, despite the fact they obtained the majority of popular vote. The alliance with the Labour Party was also short-lived and the MMM bounced back to the opposition. For the 2000 election, the MSM and the MMM formed a strategic coalition to throw out the Labour Party, which they ultimately succeeded in doing. In retrospect, it is noted that there has been a convergence of ideologies among the politicians. The enemies of yesterday can be friends of tomorrow.

6.2 Social Policies

Social policies in Mauritius date back to the 1940s. The Central Development and Welfare Committee was established, followed by the launch of a capital expenditure programme for major infrastructure projects, including modernization of the harbour and airport. In the 1950s, the government set up a social security scheme for plantation workers in an effort to promote social welfare. Power was also given to a wage tribunal to fix workers' minimum wage. The government took charge of importing rice and flour, selling these products at cost and at times subsidizing them to lower the cost of basic wage goods. Steeply progressive income taxes were imposed on the wealthy.

In its wage policy, the government struck a compromise between economic and political considerations. From the political standpoint, the Labour Party recognized that its main support came from the Hindu community, a large part of which was employed in the sugar industry. But sugar workers were demanding higher wages and legal protection, for they were still being treated like indentured labourers, hired and dismissed at will. To retain labour support, the government instituted a wages council 1963 and empowered it to set minimum wages in the sugar sector. The first wage order, issued in the 1963 bumper crop year, set the minimum wage 25% above the previous year's average level. In subsequent years the minimum was either raised or held constant, depending on the profitability of the

sugar crop and on the cost of living. As a consequence, the system introduced a downward rigidity in the money wage.

The minimum wages were initially applied to the sugar sector only. At that time, given the importance of the sugar sector, it served as a guide for labour negotiations in other sectors. Eventually, wage councils were set up in other industries, thereby shifting the wage bargaining burden from the individual level to the industry level. In the early 1970s the Industrial Relations Act replaced the wages councils with a single National Remuneration Board (NRB) composed of representatives of the government and of employers' and employees' organizations. The NRB was authorized to set minimum wages for the private sector by industry and by occupational category. Thus, the NRB has eliminated bilateral wage bargaining, thereby reducing the influence of unions and making the government the arbitrator of labour disputes. In the 1970s boom era, the government sought to favour labour by raising real wages and extending social services. These policies proved difficult to change. As the boom dampened, social expenditure, on both capital and current account, continued to rise. Transfers to private schools rose from a negligible amount in 1972/73 to Rs23 million by fiscal year 1977/78. The decision by the government to make all secondary education free indeed boosted public expenditure. By 1979 social expenditures accounted for 10% of GDP, putting an unbearable strain on the nation's resources, thereby requiring a painful readjustment.

With the structural adjustment programmes implemented, the economy started to recover by 1984 and was on the way towards economic prosperity. The growth of GNP – aggregate and per capita in real terms – and the sector-wise economic performance would give a good account of the level of transformation that has taken place in the economy. The aggregate and sectoral expansion must dramatically raise the living conditions of people. This aggregate and overall picture, however, would not indicate the extent by which the benefits of economic growth are actually shared by people belonging to different socio-income groups and living in different geographical regions. We examine the extent of distributional effects in terms of distribution of personal and factor incomes, geographical distribution of employment and poverty, regional distribution of economic and social infrastructure, and ethnic and gender access to the benefits of growth.

6.3 Distribution of Personal and Factor Incomes

The distribution of land, income and wealth across different income and social groups would throw light on consumption and savings potential of populations having consequences for social inequalities. Information on the socio-economic dimensions of wealth and land distributions is not available. We discuss here the differentials in income and wages. There are three standard methods for measuring income inequalities: the Gini inequality coefficient, the personal income share method (share of lowest and highest income groups in total income) and the factor income share method (share of labour and capital in total output). There is an improvement in income distribution in terms of these indicators over the period of economic transformation, but the results are mixed. Information on the Gini inequality coefficient is not available on a systematic basis. But the inter-period estimates by the Central Statistical Office show that the Gini coefficient decreased from 0.396 in 1986/87 to 0.379 in 1991/92, but again increased marginally to 0.387 in 1996/97. Thus, on the basis of the Gini coefficient, income distribution seems to have slightly deteriorated in recent years.

A general deterioration in income distribution is confirmed by the income share method. On average, the share of the lowest 20% of households was around 6%, whereas it was about 45% for the highest 20% of households (CSO, Household Budget Survey, 1986/87). The

survey further shows that in 1986/87, the 33.7% of households earning less than Rs2,000 shared about 12.7% of total income, while top 3.8% earning more than Rs16,000 shared about 15.7% of total income. The situation worsened in 1996/97, when the 3.8% of households earning less than Rs2,000 shared about 0.5% of total income while the top 14% earning more than Rs16,000 shared about 37.5% of total income. It is found that households have moved to higher income groups in both categories, but upward mobility is higher in high-income groups.

It will be instructive to assess the increase in labour share during the process of industrialization. Labour and capital are two major agents of production and their respective share in total production would represent the social welfare status of the working class. Labour share can be measured by compensation paid to employees as a proportion of GDP at factor cost. Comparable data on labour shares for selected countries are available up to 1993. In Mauritius, the labour share decreased from 49% in 1982 to 41% in 1993. This shows that labour share is less than that of capital, and labour has also lost its share over time. On the basis of more recent information about Mauritius, from the sources of CSO, it is found that the labour share increased to nearly 49% during 1997/98. Although labour share has picked up, there is no marked improvement in labour during the 1990s.

6.4 Regional Distribution of Benefits

Populations in different areas have shown varying ethnic characteristics and income status. Different ethnic groups have also exhibited sharp differences in their urbanization rates, ranging from a low of 7.6% for the Indo-Mauritian community to a high of 53% for Sino-Mauritian community, followed by 33.5% for Muslims and 28.7% for the general population (Census, 1972). Dispersal of infrastructure and economic activities would provide access to populations living in different geographical areas. This dispersal can be an effective source of distributing the benefits of growth across ethnic groups belonging to different income groups.

Regional distribution of industrial location and tourism activities, and consequent dispersal of employment, can prove to be one of the major strategies to distribute the benefits of development. The level of formal employment, however, has varied from one district to another, causing differential rates of unemployment in different regions (Table 17). This shows that all districts have not gained in the same magnitude as others. Informal sector employment has also increased in recent years but its geographical dimensions are not known. It can be conjectured that the proportion of informal employment will be higher in regions that are more active in terms of economic and business activities. From this perspective, the areas that are economically disadvantaged would not share the benefits of growth and employment proportionately. What is more disturbing is that the female unemployment rate is much higher in all districts.

Table 17: Unemployment rates by region and gender

Region	Male (%)	Female (%)	All %
Port Louis	18	34	23
Riviere Du Rempart	22	25	23
Pamplemousses	24	34	28
Riviere Noire	13	31	19
Savanne	12	27	18
Grand Port	16	21	18
Flacq	17	20	18
Moka	15	22	17
Plaine Wilhems	16	27	20
Rodrigues	31	65	41
All Mauritius	18	31	23

Source: Government of Mauritius, Appavoo Associates, Mauritius, 1997.

6.5 Poverty and Social Inequalities

Rapid economic growth during the 1980s and early 1990s has gone a long way in improving the lot of even the less privileged. Nevertheless, any growth process has its undesirable effects, particularly on the social fabric. These undesirable effects may be attributed to export-orientation or to the lack of an incomes policy. Deprivation in the form of poverty, social exclusion and marginalization is indeed one of the most disturbing after-effects of rapid economic growth. These social inequalities have wider implications for economic and political stability, engendering severe consequences for the long-term growth prospects.

There are three kinds of deprivation that needs to be addressed: relative poverty, social exclusion and marginalization. Exclusion, according to Keng (1997), is concerned with the severing of social links, the feeling of being left out, the inability to take charge of one's life where poverty is concerned with economic disadvantages. However, the probability of becoming excluded is much greater when one is already facing conditions of poverty. Problems such as unemployment, lack of education, poor health, poor housing, and living in a region that is isolated and regarded as deprived can push people into poverty and exclusion. Thus, marginalization is much more at an individual level.

The people-centred approach considered that standard of living, when appropriately defined, could provide a global yardstick against which poverty could be measured. Standard of living-based poverty will have two distinct components – low income and unsatisfied basic needs such as basic education and health. At the World Summit for Social Development held in Copenhagen in 1995, donors endorsed this dual approach to poverty, and committed themselves to the goals of eradicating poverty by concentrating on the creation of productive employment opportunities and social integration.

Thus, there are two ways of assessing changes in aggregate well-being – access to income and access to health, education and other social opportunities. From a policy perspective, poverty and social exclusion, therefore, can be defined in terms of capability

failure. We can have various indicators to measure capability, such as sufficiency, access and vulnerability. It has been acknowledged that our society must respond more effectively to the material and spiritual needs of individuals, the need of their families, and the communities. And today the use of real national income as an indicator of economic development is held in disrepute.

There is no official poverty line in Mauritius. The World Bank defined a benchmark figure of US\$2 per person per day in 1995. According to World Bank estimates, in 1992 about 10% of population had incomes of less than Rs2,168 per month. (UN Resource Mobilisation Target Table for Mauritius: 1997–99). The Commission Justice et Paix in 1994, however, stated that it was necessary for a family to earn at least Rs5,129 per month to enjoy a decent standard of living. According to a study by a consultant, the poverty line was drawn at Rs3,500 per month. There are standard ways of determining a cut-off income, but this figure is very close to half the median monthly income (Rs3,935) in 1996/97 (CSO, Household Budget Survey, 1996/97). In a slightly different context, Keng (1997) provided a threshold of Rs2,500 per capita for discovering the extent of social exclusion of population. This cut-off income level, however, would have to be supplemented by other social indicators, such as access to education and housing.

Determination of poverty and exclusion lines on the basis of a set of selected access indicators may be of limited value, as it is difficult to capture various issues related to human capability and welfare. Nevertheless, they at least provide a benchmark and a starting point. Duncan and Valenti (2001) adopt a relative approach to the measurement of poverty by assessing the proportion of the population whose incomes fall below 50% of median per capita equalized income. According to their estimate, 9.7% of Mauritians were below an absolute poverty threshold of Rs2,250 per month and 9.4% below 50% of median per capita income in 1996/97 (Table 18). It is also found that the incidence of poverty is disparate; it is highest in Rodrigues, followed by the regions of Flacq and Pamplemousses. The level of poverty is lower in urban districts of Port Louis and Plains Wilhelmes. These figures indicate that the incidence of poverty is much greater in rural areas of Mauritius. Whereas poverty rates vary substantially across geographical districts and locations, there are ethnic differences as well. The incidence of poverty is highest among the general population, followed by Hindus, Muslims and Sino-Mauritians.

Table 18: Geographic and ethnic incidence of poverty

	<i>Percentage of individuals below poverty line</i>					
	Absolute poverty line: (Rs2,250 per month per adult equivalent)	Relative poverty line (per cent of median monthly equiv. Income):			Fraction of poor from different regions:	
		40% of median	50% of median	60% of median	Absolute poverty	50% of median
District:						
Rodrigues	37.6	22.6	37.6	48.8	33	34
Port Louis	7.8	2.7	7.1	14.8	9.6	9.1
Pamplemousses	10.3	4.8	10.3	15.9	9.8	10.1
Rivière du Rempart	8.2	3.7	8.0	15.7	6.6	6.7
Flacq	10.8	4.1	10.4	20.8	10.5	10.4
Grand Port	9.5	2.9	8.9	18.0	8.4	8.1
Savanne	6.0	1.7	6.0	13.2	3.3	3.4
Plaines	3.9	1.5	3.6	8.6	11.9	11.4
Wilhems						
Moka	6.0	1.9	5.7	11.8	3.3	3.2
B River	7.9	2.0	7.8	17.2	3.9	3.9
Urban-rural location:						
Urban	5.0	1.8	4.6	10.3	22	21
Semi-Urban	7.9	3.4	7.7	16.0	15	15
Rural	15.7	7.6	15.6	24.2	63	64
Ethnicity:						
Hindu	8.0	3.3	7.8	14.7	38	38
Muslim	6.8	2.3	6.3	14.4	11	10
General population	14.5	7.6	14.3	21.6	50	51
Sino-Mauritian	4.8	2.4	4.8	5.6	1	1
All	9.7	4.3	9.4	16.7	100	100

Notes: HBS Mauritius 1996/97. Poverty lines based on median per capital equivalent income.

Source: Duncan and Valenti (2001: 43) 43.

It may be interesting to note here that based on an earlier World Bank standard of \$1 a day (or \$370 per capita in annual income), about 1.3 billion people (30% of the population) in developing countries live in extreme poverty. From this perspective, the incidence of extreme poverty should be very low in Mauritius. Nevertheless, it may not be surprising that some sections of population must have accumulated economic disabilities from previous generations and over a period of time owing to lack of an effective income policy. This lot can be considered socially excluded from the mainstream.

There are some estimates on the status of social exclusion, available from surveys and opinion polls. It is evident from Keng (1997: 42) that 9–10% of people are estimated as excluded on a national basis, using the cut-off revenue of Rs2,000. The distribution of exclusion varies from one area to another, being highest in Roche Bois (20%) followed by Tranquebar. Opinion polls among the respondents confirmed that these two areas have more residents having problem with two out of three facilities: housing, education and revenue (page 8). The study also shows that different areas differ from the national average for their employment characteristics. The incidence of manual semi-skilled workers is found to be

higher in Roche Bois and Tranquebar, but the number of manual non-skilled is higher in Bambous.

With rapid increase in education and economic independence, the proportion of female workers in the labour force has increased. However, because of the rapid growth of the female labour supply in recent years, the incidence of unemployment among women has increased – from 2.3% in 1990 and 7.3% in 1995 to 10% in 1998. These developments have produced some disturbing results. First, female wage rates are lower than what markets should bear in the informal sector. Although it is not supported by statistics, female wages could be less than Rs2,000 per month. In the context of Asian societies, it should not look surprising because young girls and boys looking for jobs end up with lower wages. These wages are sustainable because they live with their parents without requiring any adjustment costs.

Most female employment outside EPZ is in SMEs and the informal sector where the wages are unregulated and hence lower. Moreover, female employment in EPZ is low skill-intensive. Although they get the same wages, their mobility to high-wage, high-skill jobs is severely constrained. Finally, it is observed that the rate of absenteeism has increased among females, which further depresses their income status. These factors impede the process of women empowerment. Increase in unemployment in recent years accompanied by inflation has contributed to the loss purchasing power. It has been noted that the incidence of unemployment is higher among female workers (10% unemployment rate for female workers as against 3.7% for male workers). The economic status of the female population has particularly deteriorated because of the closure of a number of EPZ firms, which significantly started in 1989. This shows that there is a new class of unemployed women suffering from lay-off and economic recession.

7. CONCLUDING REMARKS

Export-led growth indeed helped Mauritius to increase its per capita income from US\$1,000 in 1982 to more than US\$3,000 in 1995, putting Mauritius in the category of upper middle-income countries. With relatively stable population growth, the growth of the per capita income was accelerated. Further, it attained near full employment by 1990 (most of this in low-skill textile sector) with, on an average, 5% annual real income growth in recent years. These developments converted a mono-crop (sugarcane) economy into a newly industrializing economy and it stands as a most diversified economy.

It is important to note that a good deal of industrial growth stems from favourable treatment offered to the EPZ and sugar sectors in the international markets through the Lomé Convention's sugar protocol for access to the European market and the Multi-Fibre Agreements for textile exports to Europe and the US. Some of these arrangements are under negotiation for revision and renewal, which could hold severe consequences for revitalization of the export-oriented industrial units. Nevertheless, the newly launched Africa Growth and Opportunity Act (AGOA) could mitigate the impact of some of these likely setbacks, particularly in relation to exports of clothing.

Despite Mauritius' large-scale economic transformation, socio-economic disparities have also surfaced. These disparities can be found in terms of incomes, capabilities and opportunities having wide-ranging consequences for the growth of human capability and social welfare. Whereas social security budgets are mounting, social expenditures on health, education and social welfare have been extraordinarily sluggish. Human development indicators scaled down, by which Mauritius lost its rank from 59th in 1997 to 71st in 2000 and 63rd in 2002. One of the recent efforts to mitigate the problem of economic and social

disparities is to support the development of micro enterprises under the umbrella of SMEs. It has been recognized that employment and export potential would be substantial, but constraints on the financial capability of these enterprises would have to be relaxed. In this context, the scheme of micro finance with an appropriate mix of credit and grants has been introduced with the help of publicly owned Development Bank of Mauritius.

Nevertheless, the strengths of the Mauritius growth performance stem from the strategy of economic diversification, political stability, high quality policy making and good governance. Despite changes in government with different political coalitions, there is indeed continuation of economic and social policies. The commitments to move towards a market economy have been maintained. There is a clear-cut development strategy of economic diversification, which is geared towards the new economy, with increased emphasis on growth of the services sector. Thus, while modernizing the export-oriented textile sector and the sugar industry, offshore services (financial services, free-port activities and offshore business) and, in particular, information and communication technology have attracted the attention of policy makers.

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APPENDIX A: Tests for stationarity and cointegration

Tests for stationarity were performed on each of the variables in the model given by Equation 9. We restricted attention to the Dickey–Fuller (DF) and Augmented Dickey–Fuller (ADF) tests for stationarity. The objective of DF and ADF is to test the null hypothesis of non-stationarity. If the test statistics revealed by these tests exceed the critical value at any one of the conventional levels, then we reject the null and conclude that our data are stationary.

As our results show, except for LNMVA and to a lesser extent LXPI, all our variables are non-stationary in their level forms (Table A1). We cannot reject the null of non-stationarity at the 5% level of significance. Applying the same tests to the variables in their first differences does not improve the results overall (Table A2). Except for LAGVA, other variables are still non-stationary. This might suggest that these variables are integrated of a higher order. However, Table A3 shows that second differencing also does not make some of the variables stationary. Thus on the basis of DF and ADF tests, it seems that our variables are non-stationary. A note of warning is in order, however. The tests for stationarity used here are weak tests, and we must note that our sample size is too small to apply these tests accurately. This may have produced biased results.

Tests for cointegration were also performed to detect any long-run relationship among the variables under study. As Table A4 indicates, unit root tests on the residuals of the regressions do not show signs of any long-run relationship between the variables because DF and ADF statistics are lower than their critical value at the 5% level of significance.

Table A1: Level form

	DF	ADF	DF(t)	ADF(t)
LMRW	-1.1754	-1.19	-1.0277	-1.5369
LXPI	-2.2569	-3.8833**	-1.5356	-1.1030
LMLP	3.0169	1.6573	-0.45771	-0.4529
LNMVA	-5.7168**	-4.7712**	-4.3501**	-5.2813**
LAGVA	-0.0628	-0.0332	-2.7199	-3.6859
LMRPL	2.1833	1.5013	-1.2052	-1.2357

Table A2: First difference

	DF	ADF	DF(t)	ADF(t)
LMRW	-2.6906	-1.9792	-1.0277	-1.5369
LMLP	-0.53223	-0.46645	-1.7618	-1.7000
LAGVA	-3.1861**	-3.2391**	-3.0050	-2.9385
LMRPL	-1.1477	-0.83316	-1.6608	-1.4906

Table A3: Second Difference

	DF	ADF	DF(t)	ADF(t)
LMRW	-4.1804**	-3.0707	-5.0165**	-3.6756
LMLP	-1.7277	-0.85767	-0.91307	0.44208
LMRPL	-3.3024	-1.9870	-3.1747	-1.8189

Table A4: Testing for cointegration: Unit root test on residuals

Model Specification	DF	ADF	5 % critical value
LMRW=f(LXPI, LMLP, LNMVA)	-2.6112	-3.5305	-5.0542
LMRW=f(LXPI, LMLP, LNMVA)	-2.7643	-3.7759	-5.0542
LMRW=f(LMRPL, LNMVA)	-1.5654	-1.19762	-4.4647
LMRW=f(LMRPL, LAGVA)	-2.2202	-2.8597	-4.4647